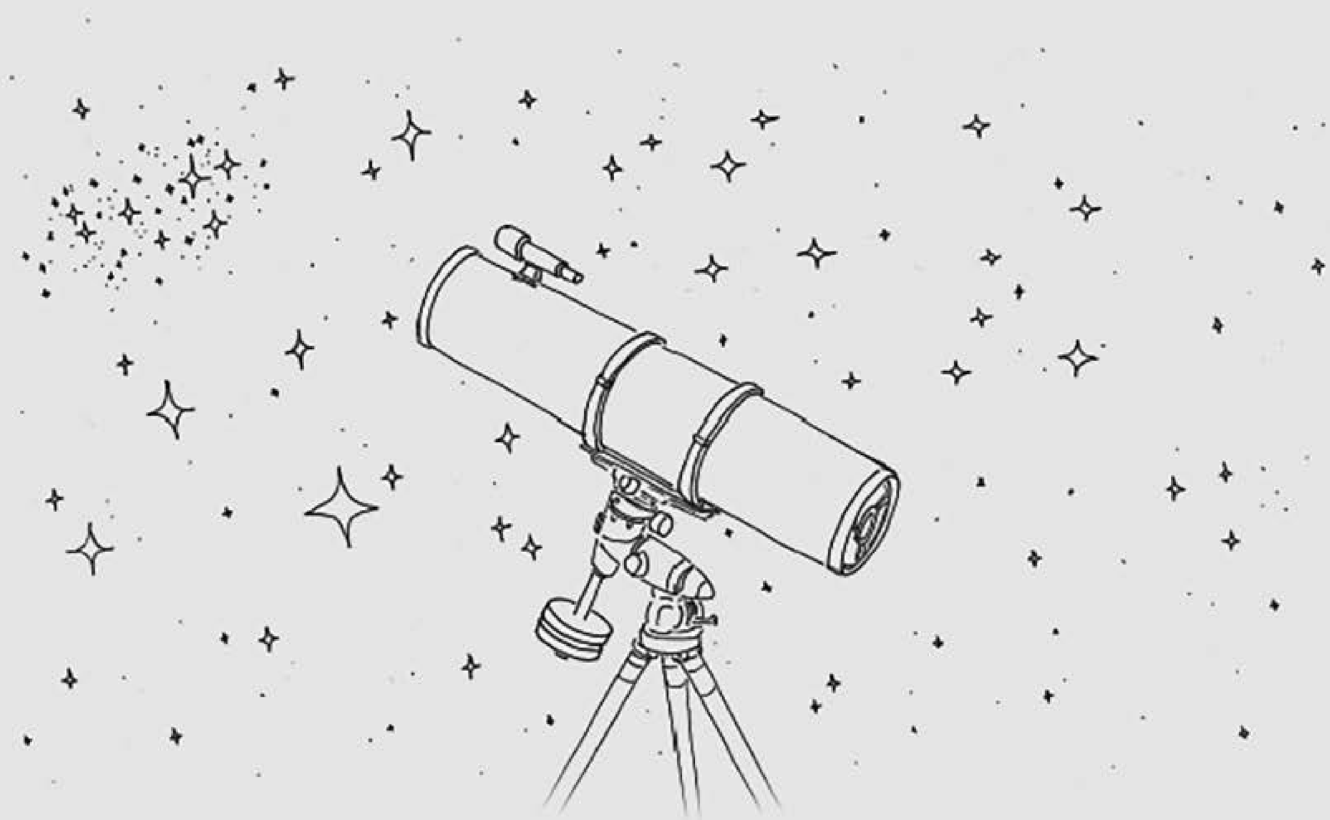
DEEP SKY HUNTER

STAR ATLAS

Michael Vlasov - deepskywatch.com

Desk Edition, Second Revision (2017)



Deep Sky Hunter - a printable atlas of deep sky objects for advanced observers. Desk (B/W) edition, 2nd revision (june 1st 2017).
Plotted DSO down to magnitude 14.0 and stars down to magnitude 10.2, comprehensive manual post-editing.
Select galaxy clusters and dense regions plotted in 21 separate "zoom" charts (with stars down to to 12-13m).
Indications of over 500 best deep sky objects (Messier, Caldwell, Herschel 400, SAC best), bright & dark nebulae, common names.
Entire sky covered by 101 charts, 2 Index maps and 21 detailed "zoom" charts. Supplementary object lists available.
Each chart covers 20x30° (40x30° double page spreads), designed for A3 portrait B/W printing at 600 dpi. W/B field editon available
Source chart data was generated by "Sky Map Pro 10" software, C A Mariott ® all rights reserved.
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MAP KEY

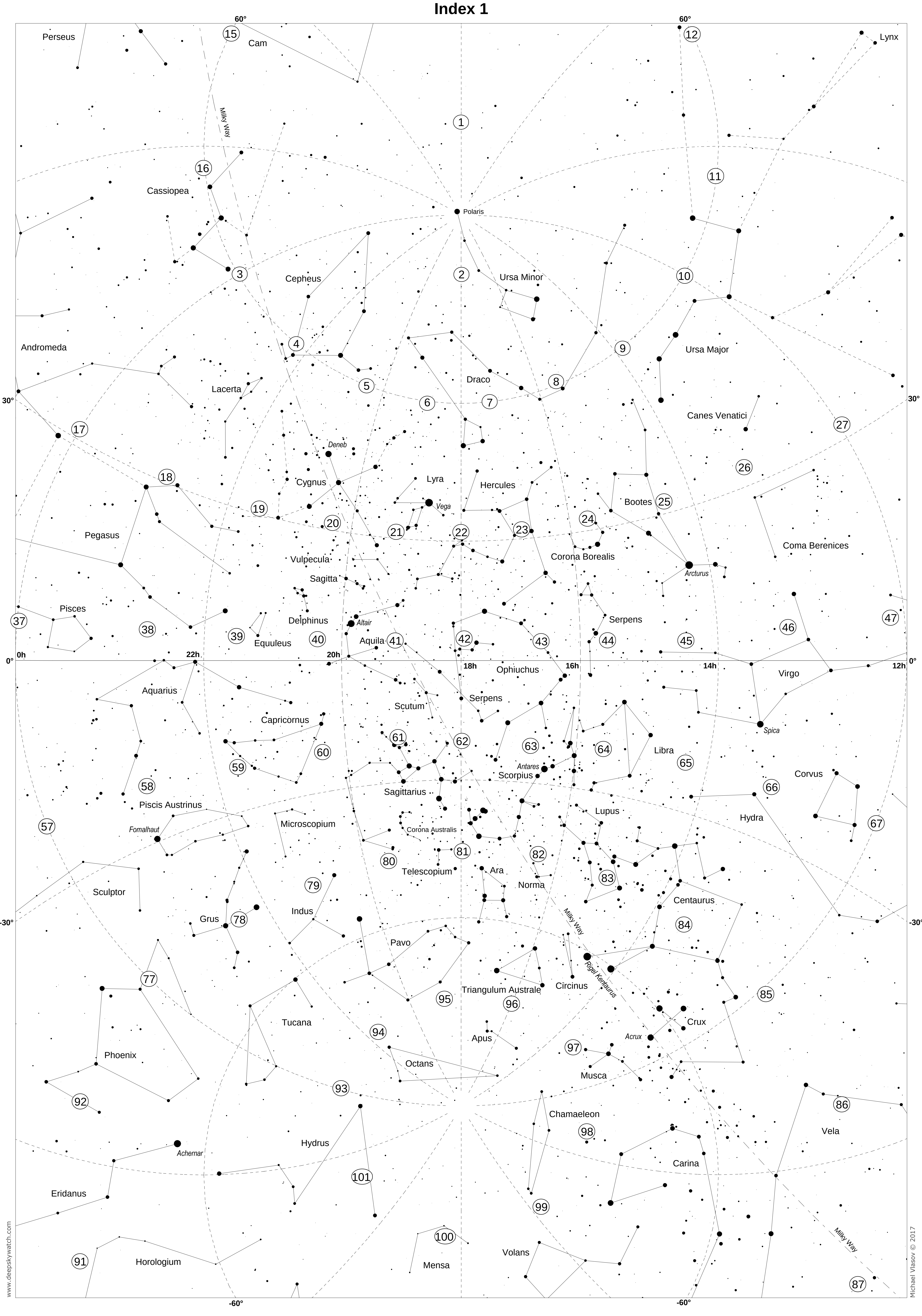
<0 1 2 3 4 5 6 7 8 9 10

Quasar
Multiple star
Dark nebula
Galaxy
Bright nebula

Galaxy cluster / other
Globular cluster
Open cluster
Planetary nebula
4984 NGC catalog number

IC 3799 Other catalog number
* Best DSO, indicates that object is listed in: Messier / Caldwell / Herschel 400 / SAC best
46 Next neighbour page reference
chart A17 Detailed "zoom" chart reference

Index 1



60°
60°
30°
30°
0°
0°
-30°
-30°
-60°
-60°
0h
22h
20h
18h
16h
14h
12h
Perseus
Cam
Lynx
Milky Way
Cassiopea
Polaris
Cepheus
Ursa Minor
Andromeda
Ursa Major
Draco
Lacerta
Canes Venatici
Deneb
Cygnus
Lyra
Vega
Hercules
Bootes
Pegasus
Vulpecula
Corona Borealis
Coma Berenices
Arcturus
Sagitta
Pisces
Delphinus
Altair
Aquila
Equuleus
Serpens
Ophiuchus
Virgo
Aquarius
Serpens
Scutum
Spica
Capricornus
Libra
Antares
Scorpius
Corvus
Sagittarius
Piscis Austrinus
Lupus
Hydra
Fomalhaut
Microscopium
Corona Australis
Telescopium
Ara
Norma
Centaurus
Sculptor
Indus
Grus
Milky Way
Pavo
Rigel Kentaurus
Circinus
Triangulum Australe
Crux
Tucana
Apus
Acrux
Phoenix
Octans
Musca
Chamaeleon
Vela
Hydrus
Achernar
Carina
Eridanus
Mensa
Volans
Horologium
Milky Way
1
2
3
4
5
6
7
8
9
10
11
12
15
16
17
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19
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21
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Index 2

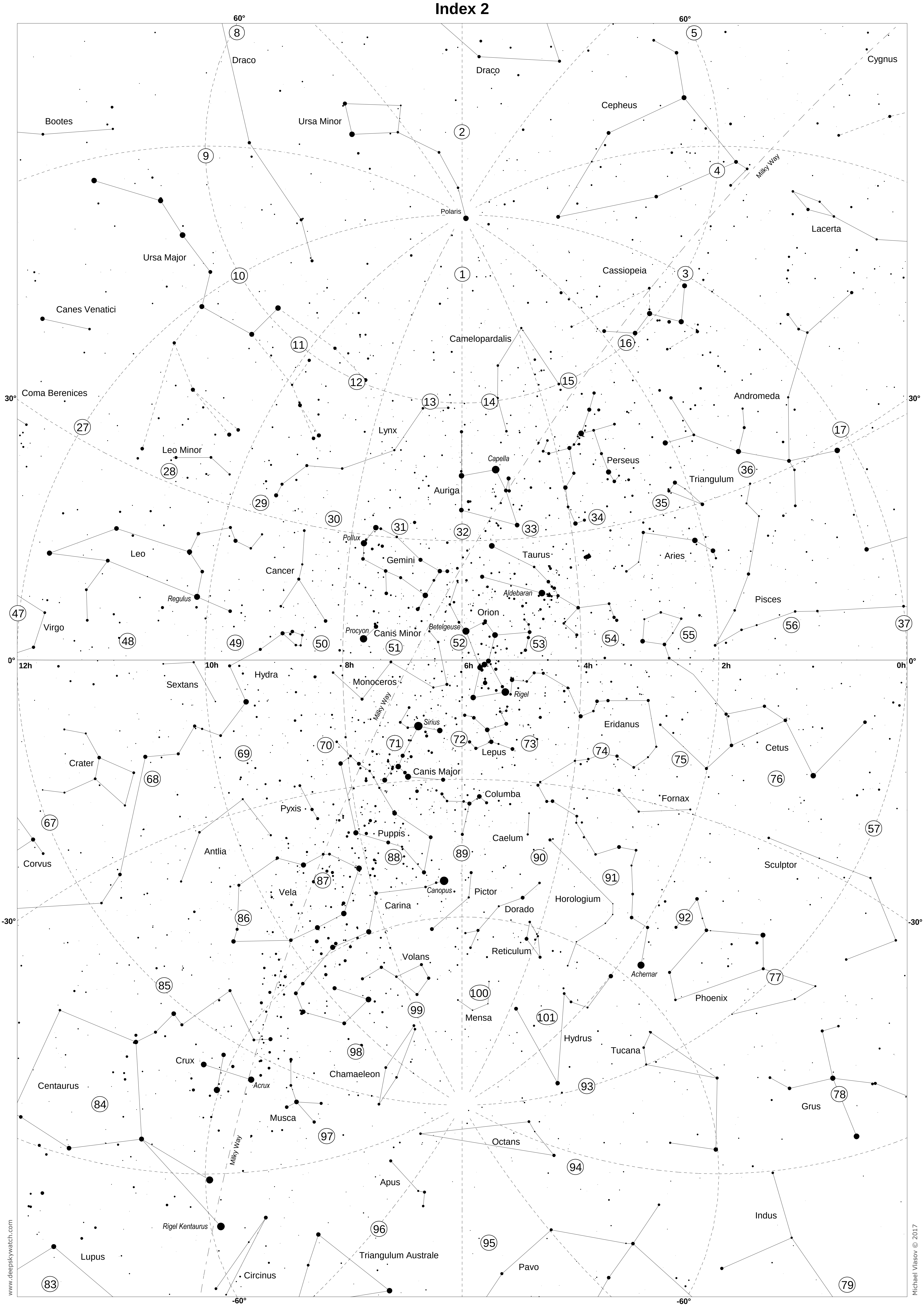
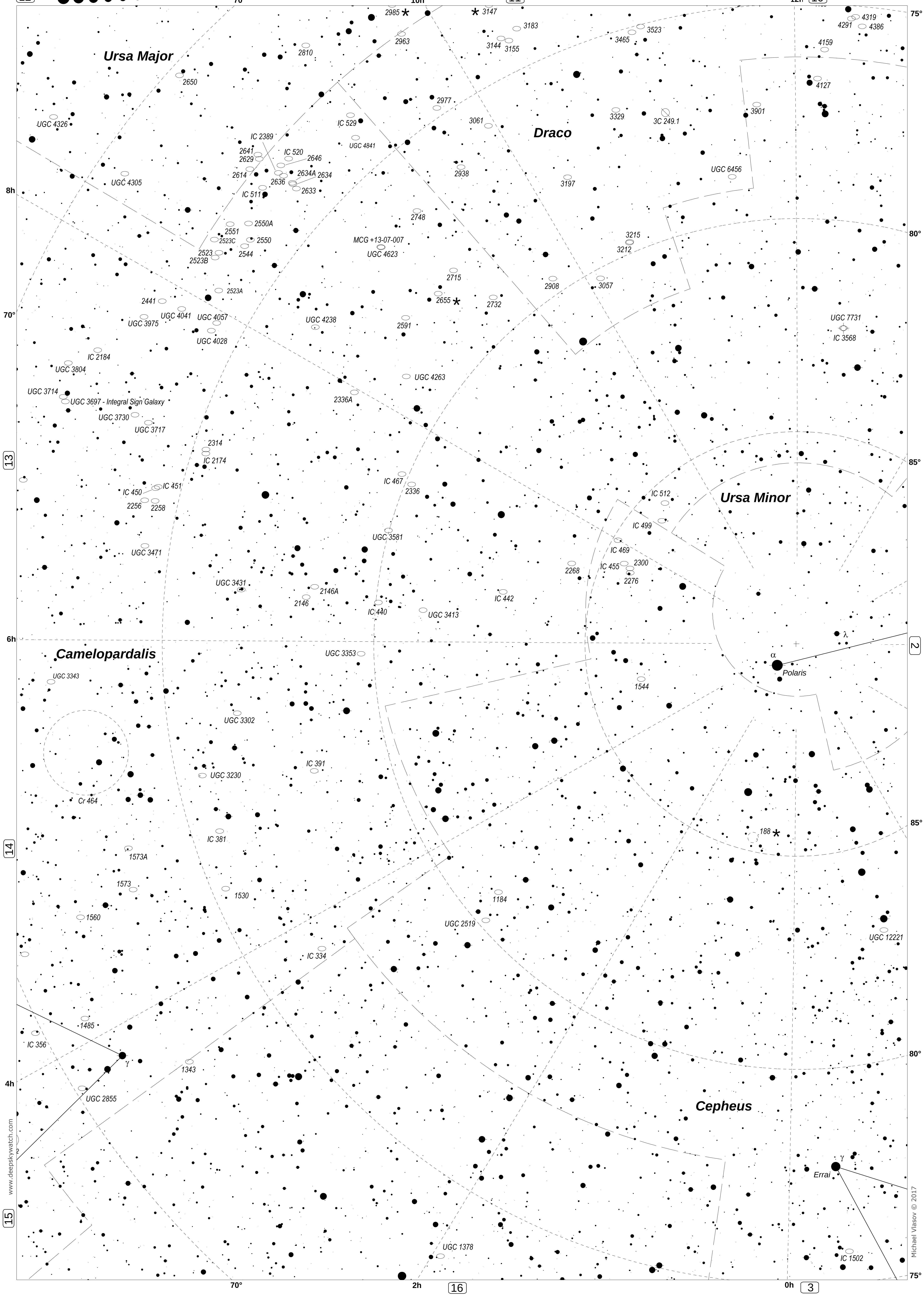

60°
60°
Draco
Draco
Cygnus
Bootes
Ursa Minor
Cepheus
Milky Way
Polaris
Lacerta
Ursa Major
Cassiopeia
Canes Venatici
Camelopardalis
Coma Berenices
Andromeda
30°
30°
Lynx
Leo Minor
Capella
Perseus
Triangulum
Auriga
Pollux
Gemini
Taurus
Aries
Leo
Cancer
Aldebaran
Pisces
Regulus
Orion
Virgo
Procyon
Canis Minor
Betelgeuse
0°
12h
10h
8h
6h
4h
2h
0h
0°
Hydra
Sextans
Monoceros
Rigel
Milky Way
Sirius
Eridanus
Lepus
Cetus
Crater
Canis Major
Columba
Fornax
Pyxis
Caelum
Puppis
Antlia
Corvus
Sculptor
Vela
Canopus
Pictor
Carina
Dorado
Horologium
-30°
-30°
Reticulum
Volans
Achernar
Phoenix
Mensa
Hydrus
Tucana
Crux
Acrux
Chamaeleon
Centaurus
Grus
Musca
Octans
Milky Way
Apus
Indus
Rigel Kentaurus
Triangulum Australe
Lupus
Pavo
Circinus
-60°
-60°
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Chart 1



1 2 3 4 5 6 7 8 9 10
12
11
10
70°
10h
12h
75°
80°
85°
8h
6h
4h
70°
13
14
15
2
16
3
2h
0h
Ursa Major
Draco
Ursa Minor
Camelopardalis
Cepheus
Polaris
Errai
2985
3147
3183
3144
3155
3465
3523
4319
4291
4386
4159
4127
2963
2810
2650
2977
3061
3329
3C 249.1
3901
UGC 4326
IC 529
UGC 4841
IC 2389
2641
2629
IC 520
2646
2614
2636
2634A
2634
2633
IC 511
UGC 4305
2938
3197
UGC 6456
2748
2551
2550A
2523C
2550
2523
2523B
2544
MCG +13-07-007
UGC 4623
3215
3212
2715
2908
3057
2523A
2655
2732
2441
UGC 4041
UGC 4057
UGC 3975
UGC 4238
2591
UGC 4028
UGC 7731
IC 3568
IC 2184
UGC 3804
UGC 4263
UGC 3714
UGC 3697 - Integral Sign Galaxy
2336A
UGC 3730
UGC 3717
2314
IC 2174
IC 467
2336
IC 450
IC 451
2256
2258
IC 512
IC 499
UGC 3581
IC 469
UGC 3471
IC 455
2300
2268
2276
UGC 3431
2146A
2146
IC 440
IC 442
UGC 3413
UGC 3353
1544
UGC 3343
UGC 3302
IC 391
UGC 3230
Cr 464
IC 381
1573A
188
1573
1530
1184
1560
UGC 2519
IC 334
UGC 12221
1485
IC 356
1343
UGC 2855
UGC 1378
IC 1502
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Chart 2

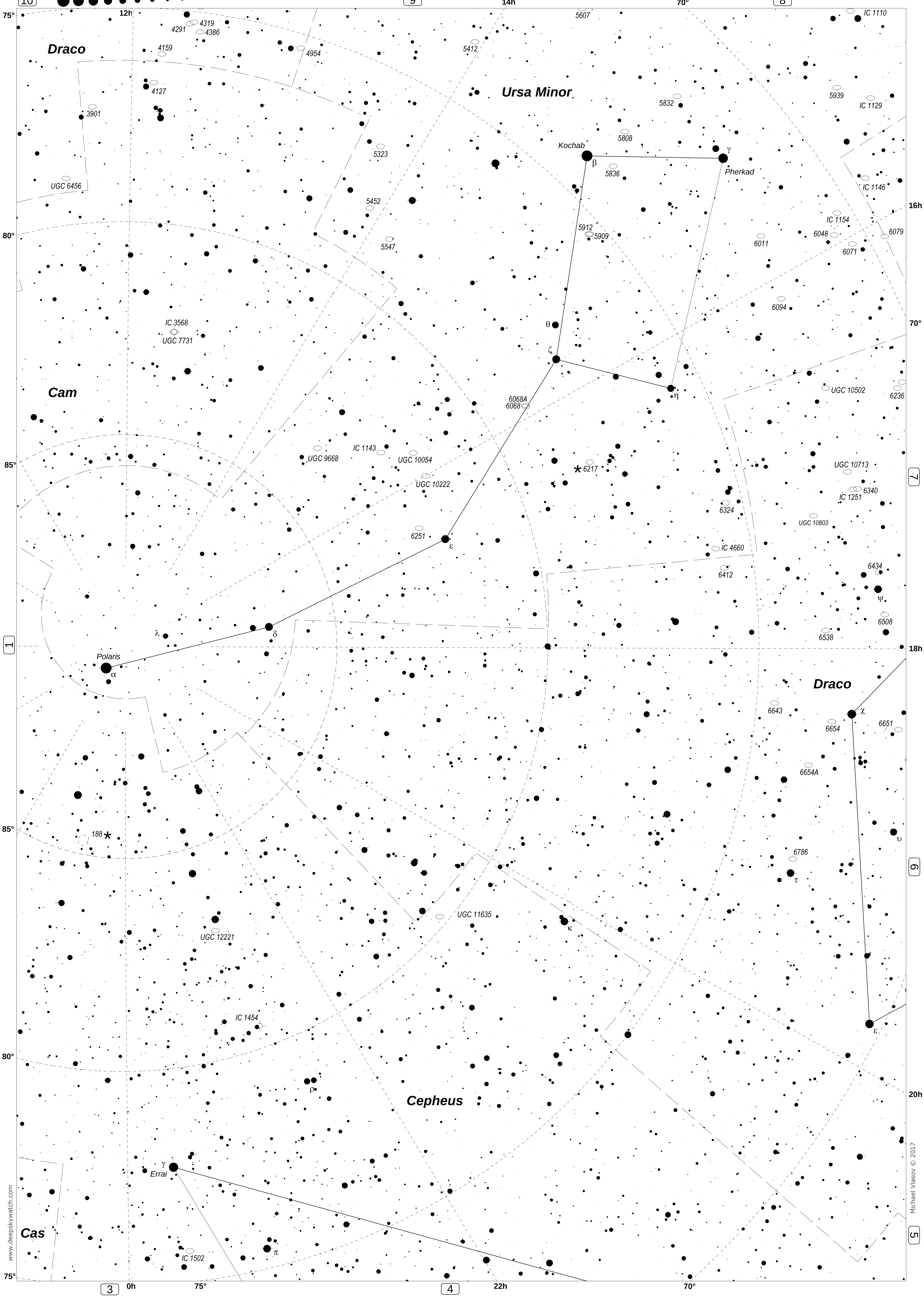

1 2 3 4 5 6 7 8 9 10
10
9
8
7
6
5
4
3
1
12h
14h
16h
18h
20h
22h
0h
70°
75°
80°
85°
Draco
Ursa Minor
Cam
Cepheus
Cas
Kochab
Pherkad
Polaris
Errai
4319
4291
4386
4159
4954
4127
3901
UGC 6456
5607
5412
5323
5452
5547
IC 1110
5939
IC 1129
5832
5808
5836
IC 1146
IC 1154
6048
6079
6011
6071
5912
5909
6094
IC 3568
UGC 7731
UGC 10502
6236
6068A
6068
UGC 9668
IC 1143
UGC 10054
UGC 10222
6217
UGC 10713
6340
IC 1251
6324
UGC 10803
6251
IC 4660
6412
6434
6508
6538
6643
6654
6651
6654A
188
6786
UGC 11635
UGC 12221
IC 1454
IC 1502
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Chart 3

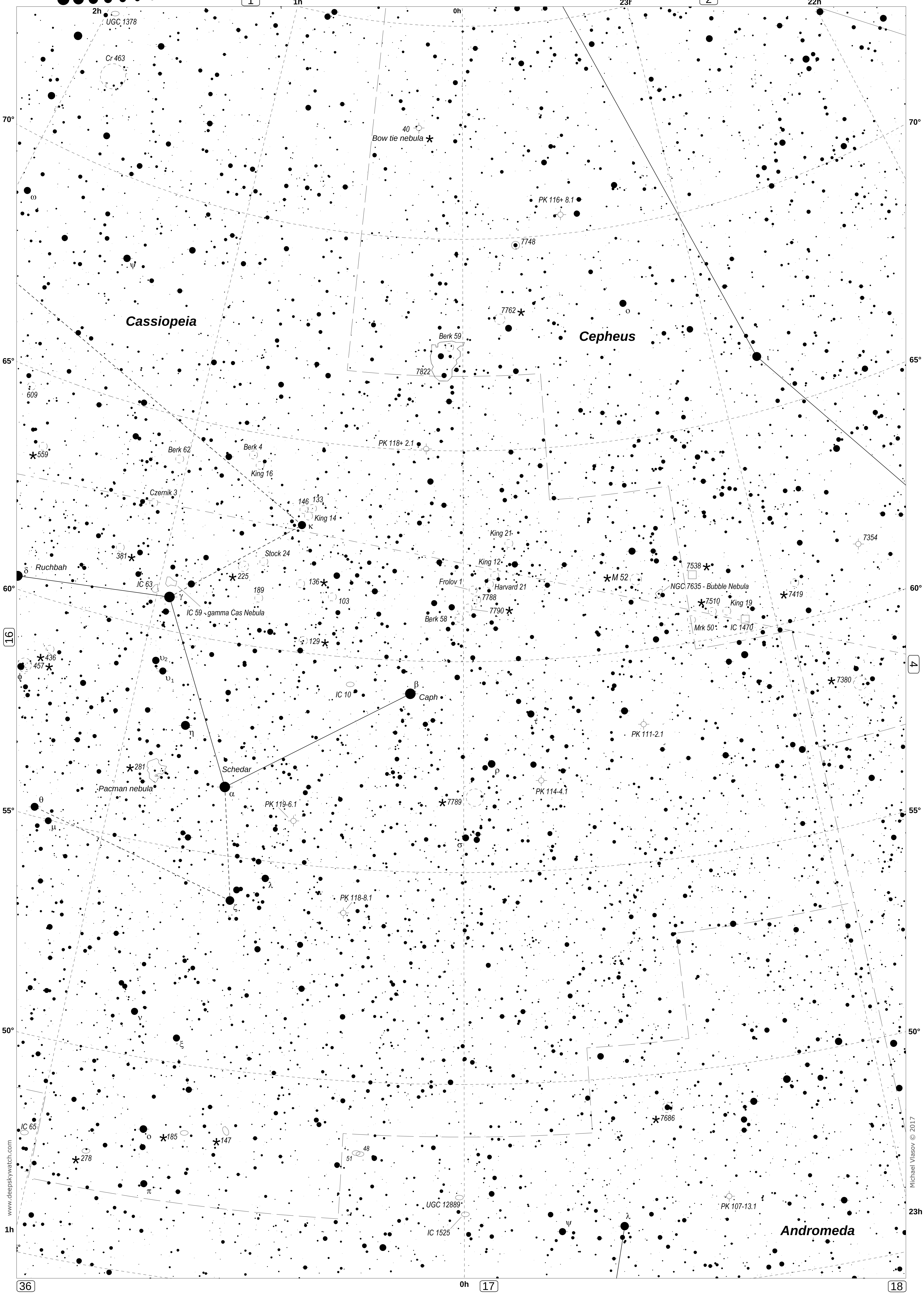
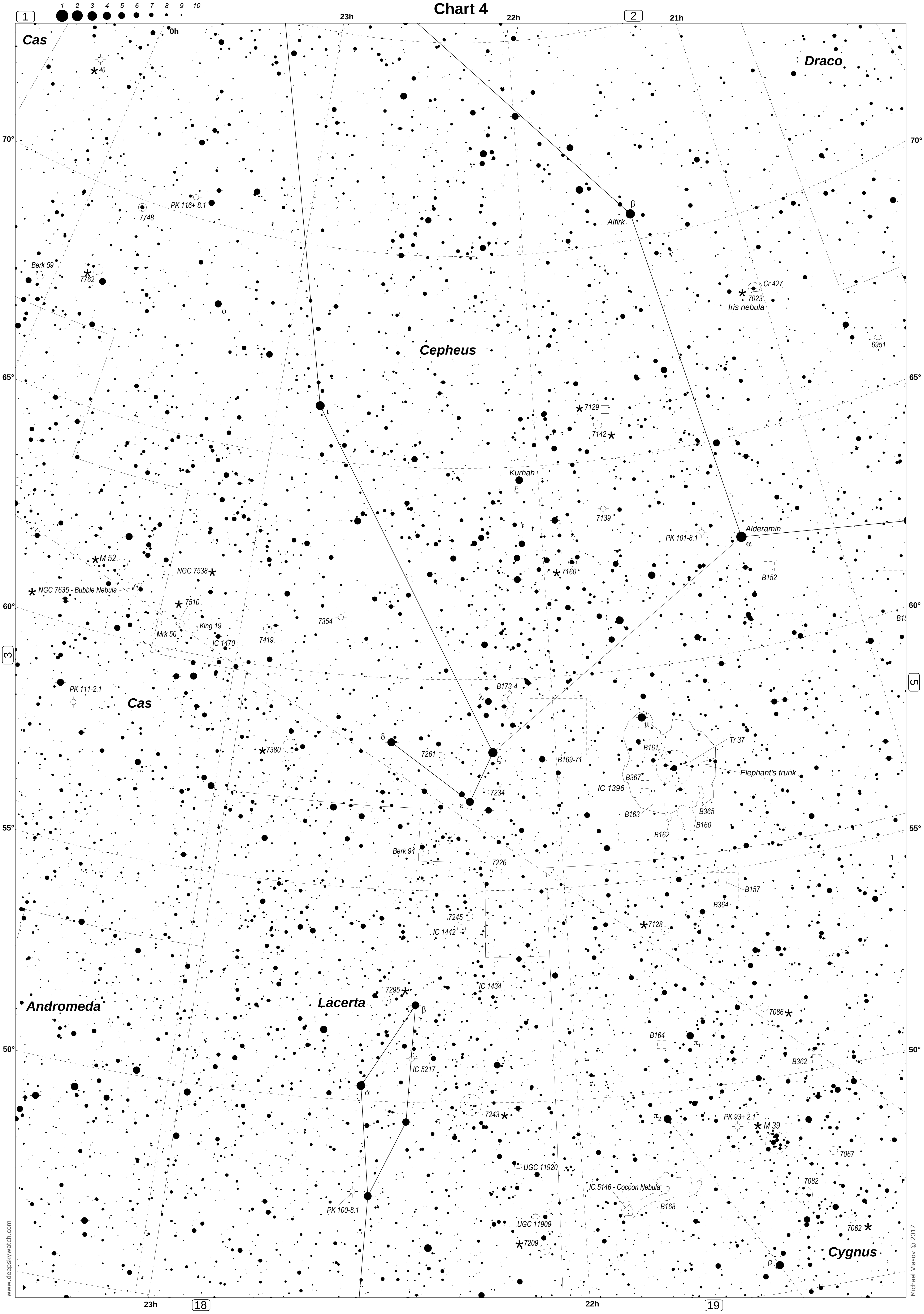
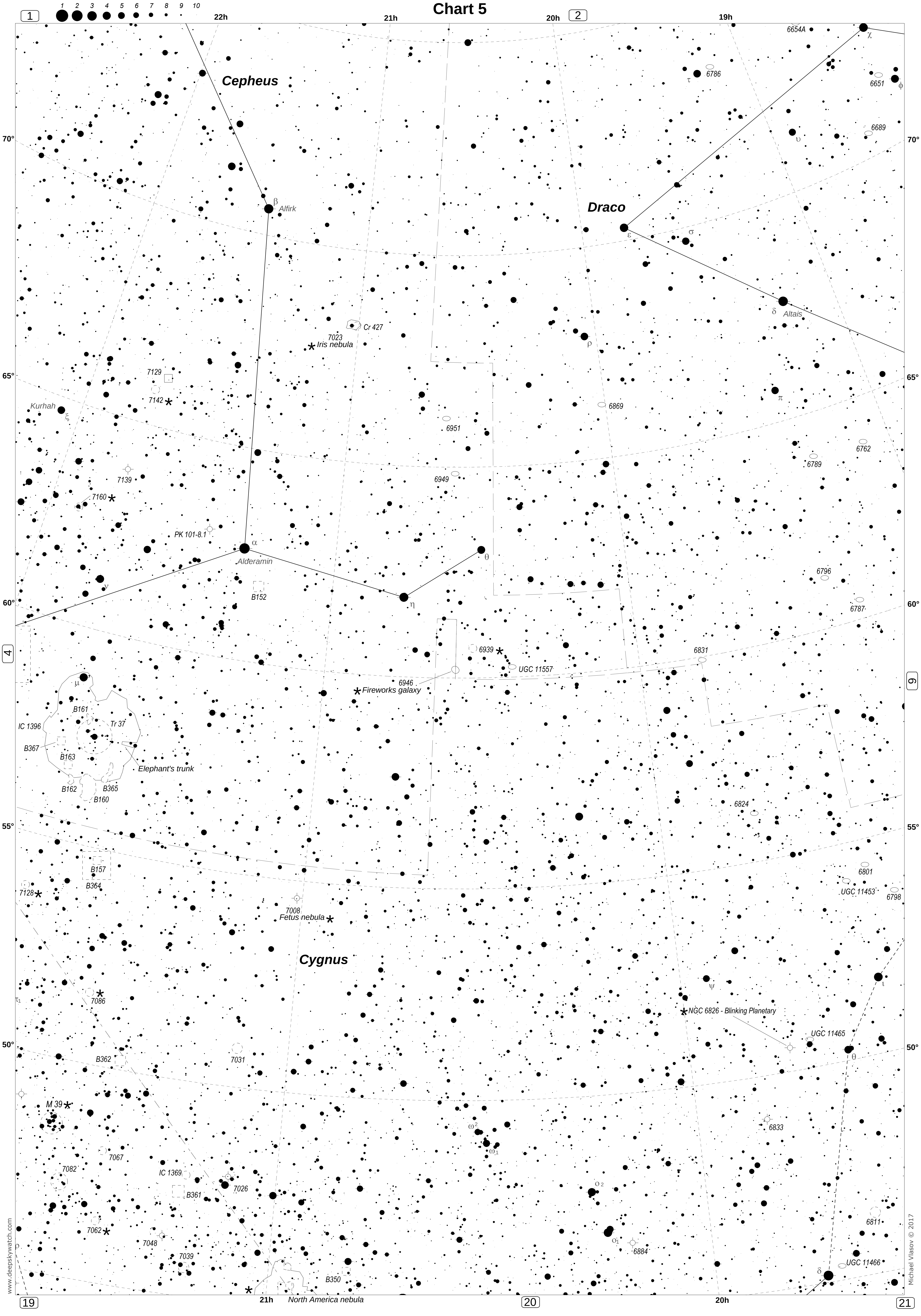

1 2 3 4 5 6 7 8 9 10
1
2
2h
1h
0h
23h
22h
UGC 1378
Cr 463
70°
40
Bow tie nebula
ω
PK 116+ 8.1
7748
ψ
Cassiopeia
7762
ο
Cepheus
Berk 59
7822
ι
65°
609
559
Berk 62
Berk 4
King 16
PK 118+ 2.1
Czernik 3
146
133
King 14
κ
King 21
7354
381
Stock 24
King 12
7538
δ
Ruchbah
225
136
Frolov 1
M 52
IC 63
189
Harvard 21
NGC 7635 - Bubble Nebula
60°
103
7788
7510
King 19
7419
γ
IC 59 - gamma Cas Nebula
7790
Berk 58
Mrk 50
IC 1470
16
129
4
436
457
υ2
υ1
φ
β
Caph
IC 10
7380
τ
η
PK 111-2.1
ρ
281
Schedar
Pacman nebula
α
PK 114-4.1
7789
θ
55°
PK 119-6.1
μ
σ
λ
ζ
PK 118-8.1
ν
50°
ξ
7686
IC 65
ο
185
147
48
51
278
π
UGC 12889
PK 107-13.1
IC 1525
ψ
λ
Andromeda
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36
17
18

Chart 4



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Chart 5



1 2 3 4 5 6 7 8 9 10
1
2
4
9
19
20
21
22h
21h
20h
19h
70°
65°
60°
55°
50°
Cepheus
Draco
Cygnus
Alfirk
Alderamin
Altais
Kurhah
6654A
6786
6651
6689
Cr 427
7023
Iris nebula
7129
7142
6869
6951
6762
6789
7139
6949
7160
PK 101-8.1
6796
6787
B152
6939
UGC 11557
6831
6946
Fireworks galaxy
B161
IC 1396
Tr 37
B367
B163
Elephant's trunk
B162
B365
B160
6824
B157
B364
7128
6801
UGC 11453
6798
7008
Fetus nebula
7086
NGC 6826 - Blinking Planetary
UGC 11465
B362
7031
M 39
6833
7067
7082
IC 1369
7026
B361
6811
7062
7048
7039
6884
UGC 11466
B350
North America nebula
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Chart 6

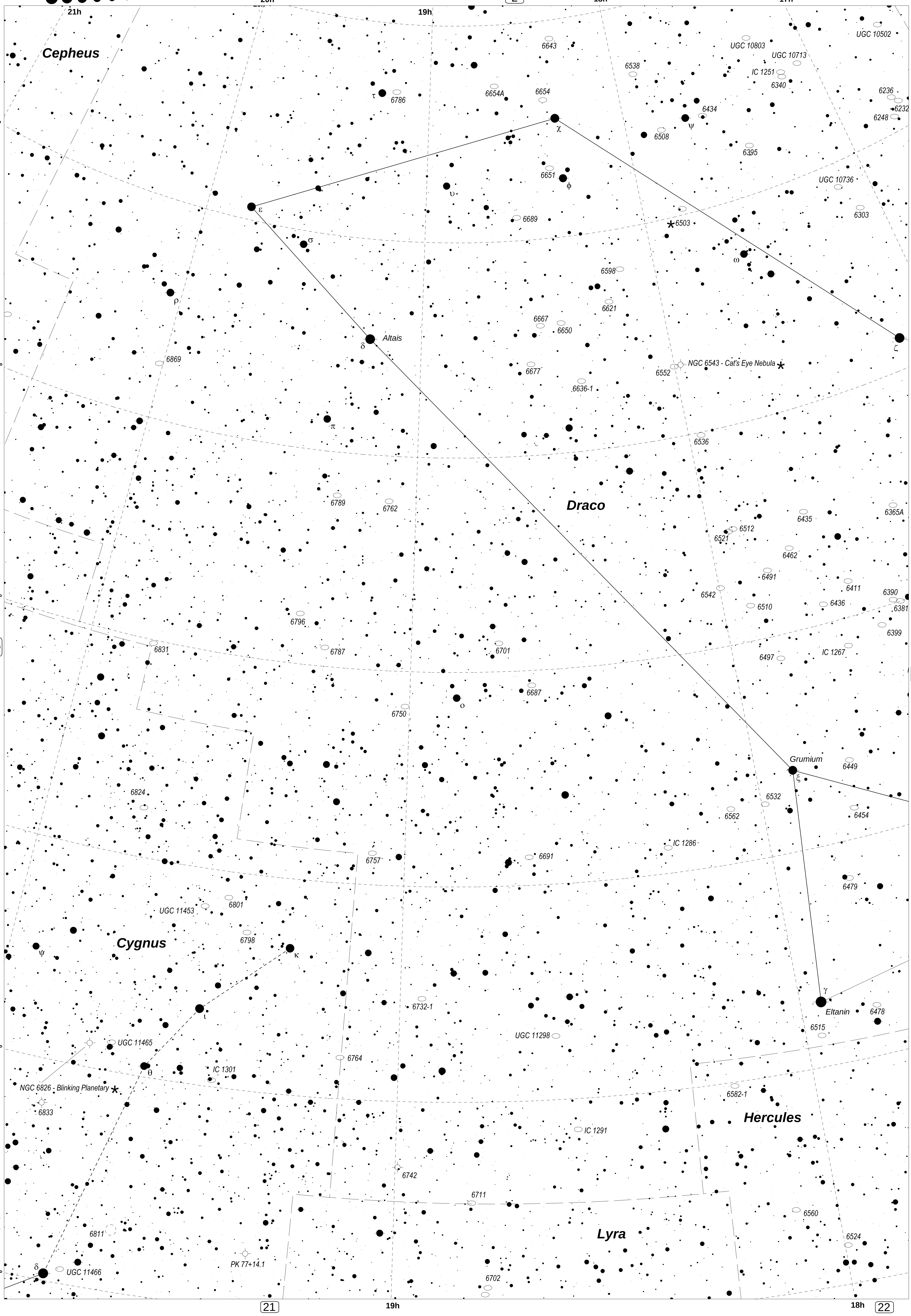
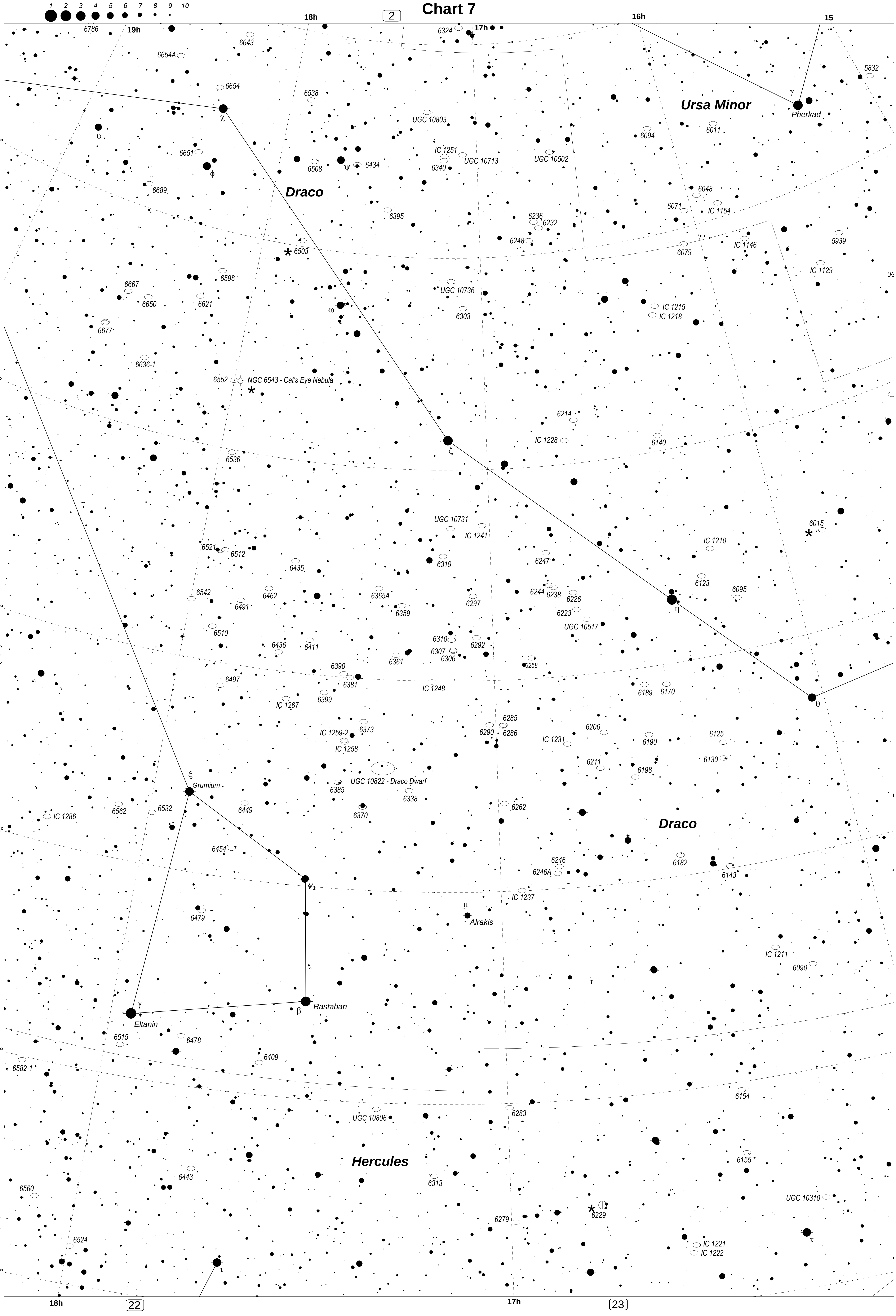

1 2 3 4 5 6 7 8 9 10
2
5
7
21
22
21h
20h
19h
18h
17h
70°
65°
60°
55°
50°
45°
Cepheus
Draco
Cygnus
Hercules
Lyra
Altais
Grumium
Eltanin
NGC 6543 - Cat's Eye Nebula
NGC 6826 - Blinking Planetary
PK 77+14.1
UGC 10502
UGC 10803
UGC 10713
IC 1251
UGC 10736
UGC 11453
UGC 11465
UGC 11466
UGC 11298
IC 1286
IC 1267
IC 1301
IC 1291
6643
6538
6340
6236
6232
6248
6654A
6654
6786
6434
6508
6395
6651
6689
6503
6303
6598
6621
6667
6650
6869
6677
6552
6636-1
6536
6789
6762
6365A
6435
6512
6521
6462
6491
6411
6542
6510
6436
6390
6381
6399
6796
6831
6787
6701
6497
6687
6750
6449
6824
6532
6562
6454
6757
6691
6479
6801
6798
6732-1
6478
6515
6764
6833
6582-1
6742
6711
6560
6811
6524
6702
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Chart 7



1 2 3 4 5 6 7 8 9 10
18h
2
17h
16h
15
19h
70°
65°
60°
55°
50°
45°
9
8
22
23
Draco
Ursa Minor
Hercules
Pherkad
Grumium
Eltanin
Rastaban
Alrakis
NGC 6543 - Cat's Eye Nebula
UGC 10822 - Draco Dwarf
6786
6643
6654A
6654
6538
6324
UGC 10803
IC 1251
UGC 10713
6340
UGC 10502
6094
6011
5832
6651
6508
6434
6689
6395
6236
6232
6048
6071
IC 1154
6248
6079
IC 1146
5939
IC 1129
6503
6598
6667
6650
6621
UGC 10736
6303
IC 1215
IC 1218
6677
6636-1
6552
6214
IC 1228
6140
6536
UGC 10731
IC 1241
6015
IC 1210
6521
6512
6435
6319
6247
6123
6542
6491
6462
6365A
6359
6297
6244
6238
6226
6095
6223
UGC 10517
6510
6436
6411
6310
6292
6307
6306
6361
6258
6390
6381
6497
IC 1248
6189
6170
IC 1267
6399
6285
6290
6286
IC 1259-2
6373
6206
6125
IC 1231
6190
IC 1258
6211
6130
6198
6385
6338
IC 1286
6562
6532
6449
6262
6370
6454
6246
6182
6246A
6143
IC 1237
6479
IC 1211
6090
6515
6478
6409
6582-1
6154
UGC 10806
6283
6443
6313
6155
6560
UGC 10310
6229
6279
6524
IC 1221
IC 1222
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Chart 8

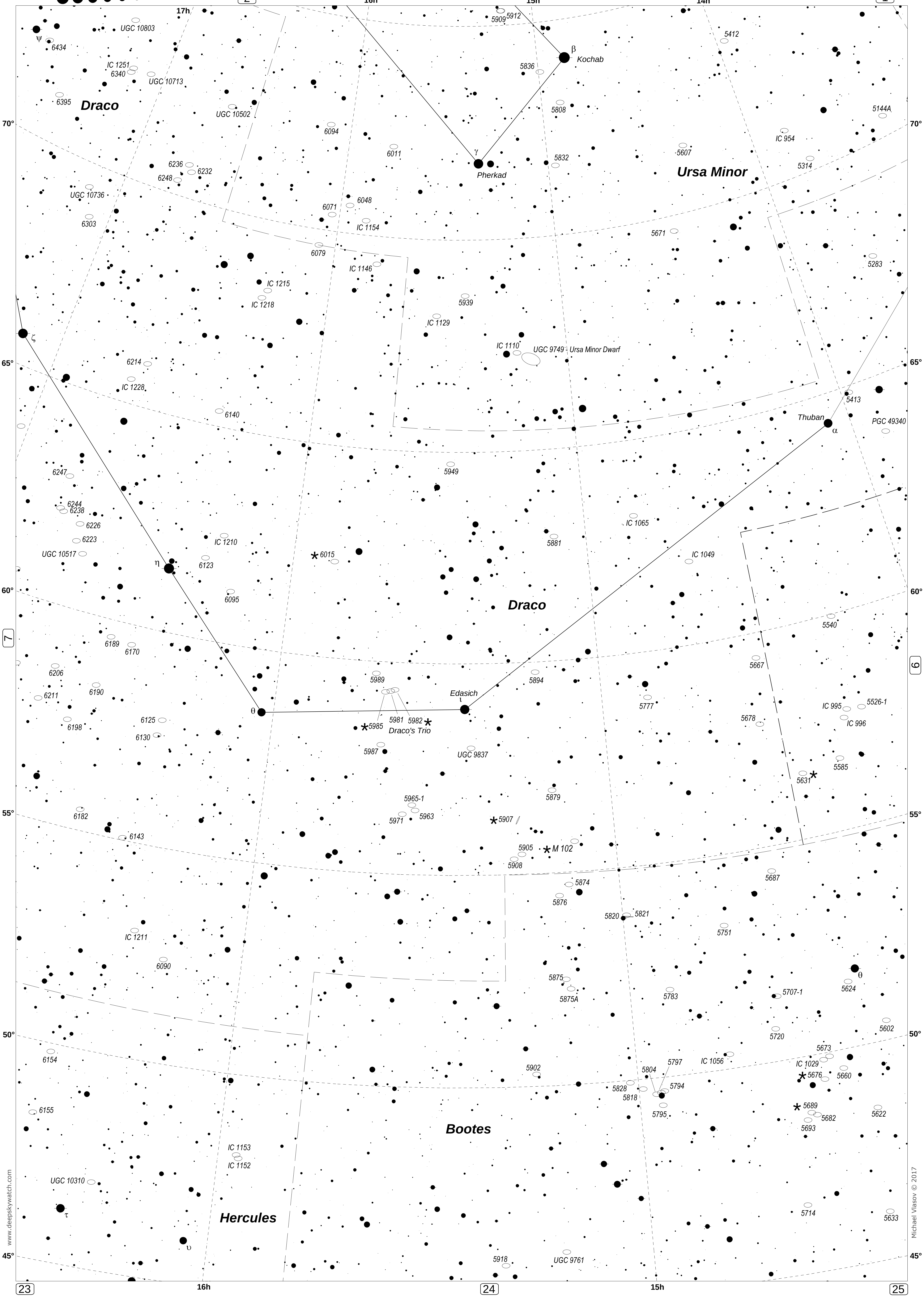
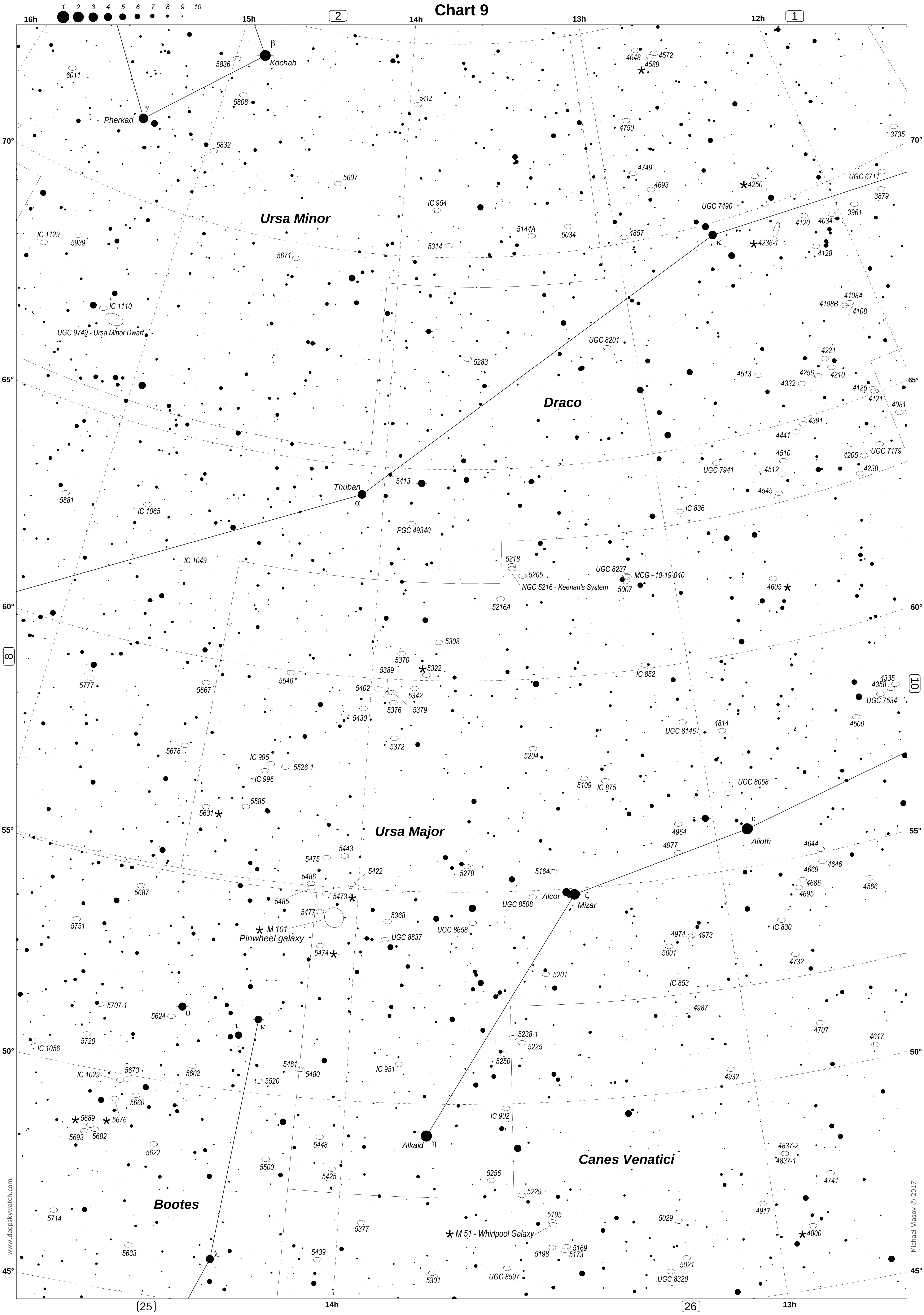
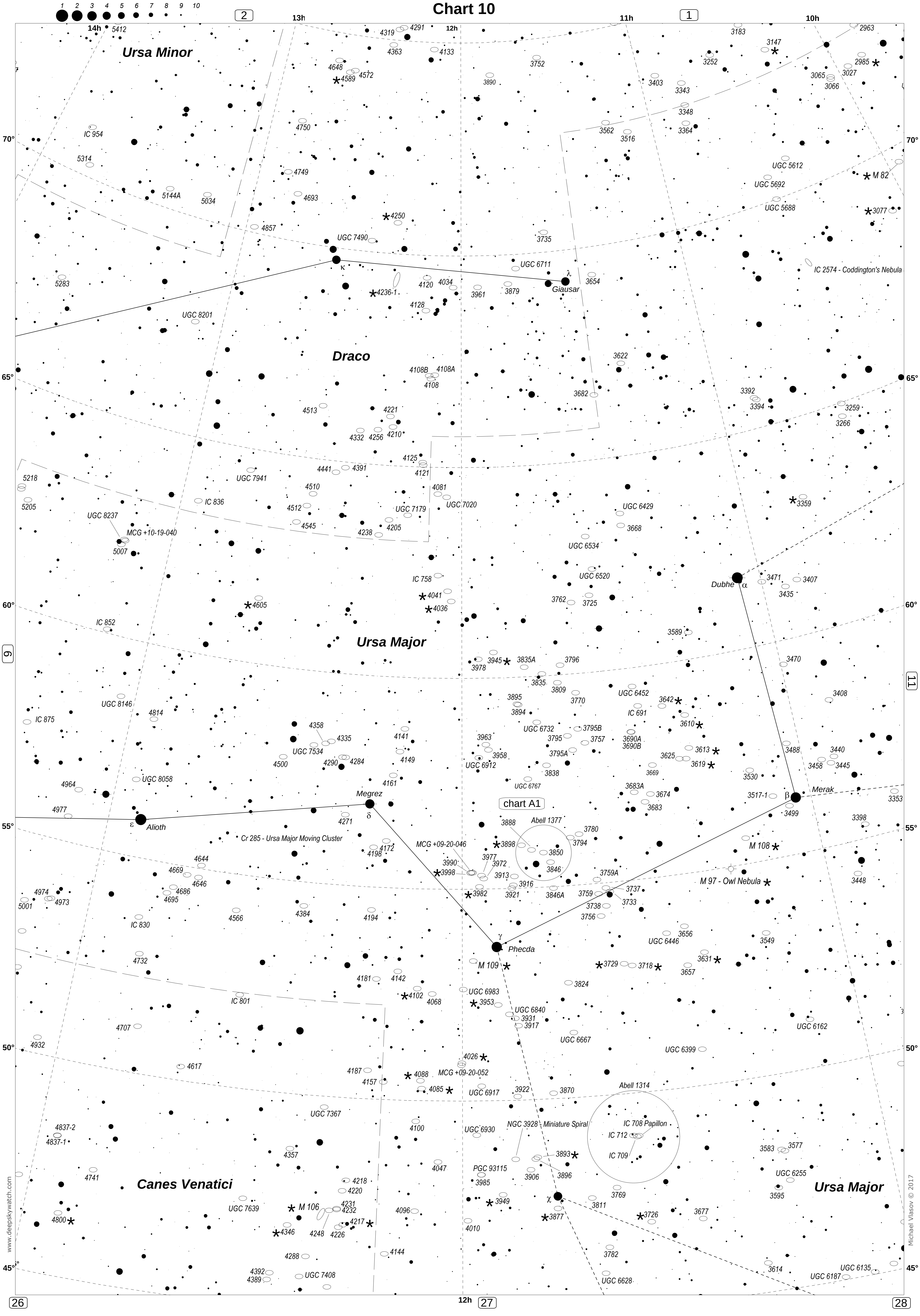

1 2 3 4 5 6 7 8 9 10
2
1
7
6
23
24
25
17h
16h
15h
14h
70°
65°
60°
55°
50°
45°
Draco
Ursa Minor
Bootes
Hercules
Kochab
Pherkad
Thuban
Edasich
Draco's Trio
UGC 9749 - Ursa Minor Dwarf
M 102
UGC 10803
6434
IC 1251
6340
UGC 10713
6395
UGC 10502
6094
6011
5909
5912
5836
5808
5412
5144A
IC 954
5607
5314
5832
6236
6232
6248
UGC 10736
6303
6071
6048
IC 1154
6079
5671
5283
IC 1146
IC 1215
IC 1218
5939
IC 1129
IC 1110
6214
IC 1228
6140
5413
PGC 49340
6247
5949
6244
6238
6226
6223
UGC 10517
IC 1210
6123
6015
IC 1065
5881
IC 1049
6095
Draco
5540
6189
6170
6206
6190
6211
5989
5894
5667
5777
6125
6198
6130
5985
5981
5982
5678
IC 995
5526-1
IC 996
5987
UGC 9837
5585
5631
6182
5965-1
5963
5971
5879
5907
6143
5905
5908
5687
5874
5876
5820
5821
IC 1211
5751
6090
5875
5875A
5783
5707-1
5624
5720
5602
6154
5902
5804
5797
IC 1056
5673
IC 1029
5676
5660
5828
5794
5818
5795
6155
5689
5682
5622
5693
IC 1153
IC 1152
UGC 10310
5714
5633
5918
UGC 9761
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Chart 9



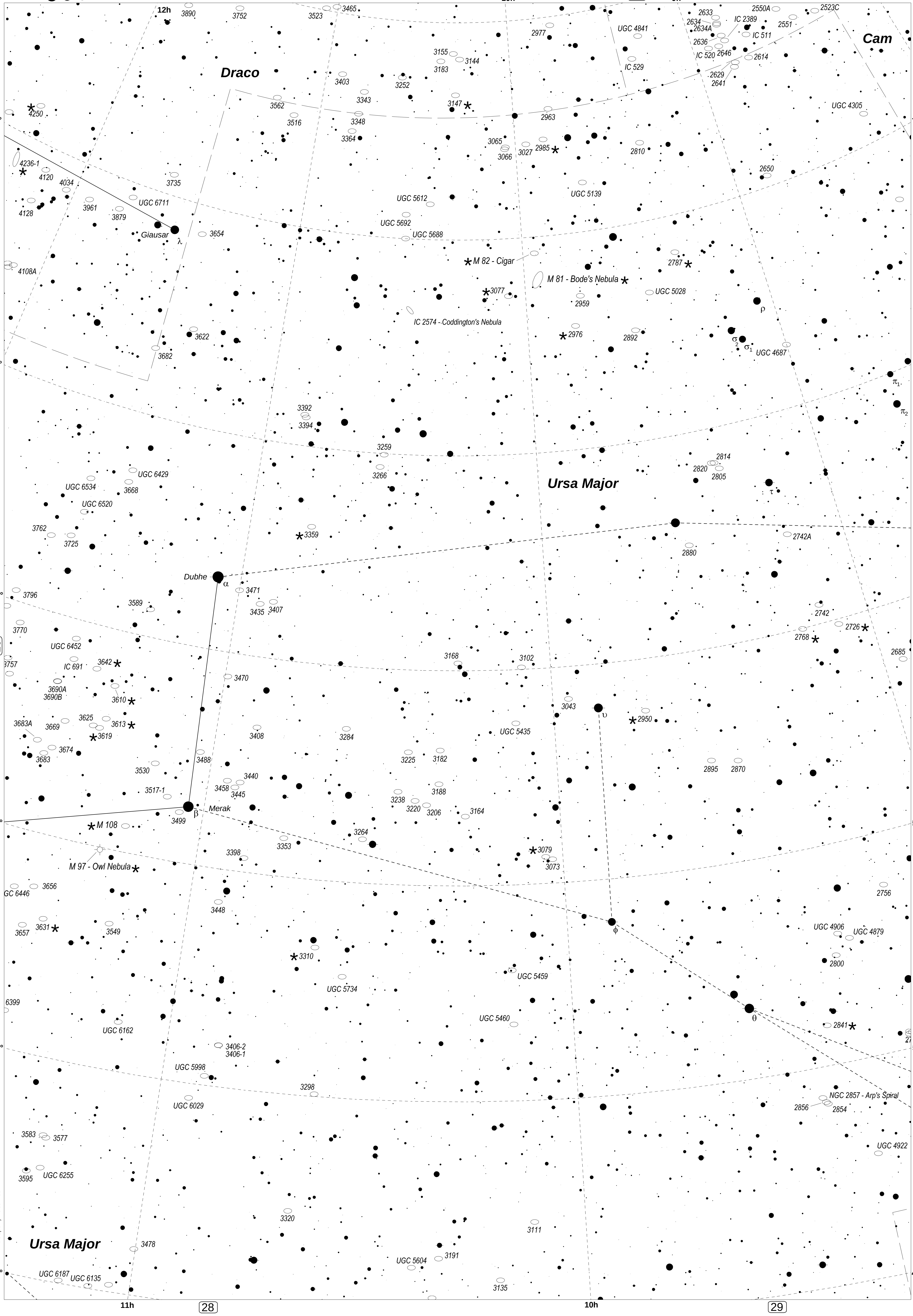
1 2 3 4 5 6 7 8 9 10
16h
15h
14h
13h
12h
2
1
8
10
25
26
14h
13h
70°
65°
60°
55°
50°
45°
Ursa Minor
Draco
Ursa Major
Canes Venatici
Bootes
Kochab
Pherkad
Thuban
Alioth
Alcor
Mizar
Alkaid
M 101
Pinwheel galaxy
M 51 - Whirlpool Galaxy
UGC 9749 - Ursa Minor Dwarf
NGC 5216 - Keenan's System
MCG +10-19-040
IC 1129
IC 1110
IC 1065
IC 1049
IC 954
IC 995
IC 996
IC 875
IC 852
IC 836
IC 830
IC 853
IC 951
IC 902
IC 1056
IC 1029
UGC 6711
UGC 7490
UGC 8201
UGC 7941
UGC 8237
UGC 8146
UGC 8058
UGC 7179
UGC 7534
UGC 8508
UGC 8658
UGC 8837
UGC 8597
UGC 8320
PGC 49340
6011
5836
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5671
5314
5144A
5034
4857
4750
4749
4693
4648
4572
4589
4250
3735
3879
3961
4120
4034
4236-1
4128
4108A
4108B
4108
5283
4221
4513
4256
4210
4332
4125
4121
4081
4391
4441
4510
4205
4512
4238
4545
5413
5881
5218
5205
5007
5216A
4605
5308
5370
5389
5322
5402
5342
5376
5379
5430
5540
5667
5777
4814
4335
4358
4500
5372
5678
5526-1
5204
5109
5585
5631
4964
4977
4644
4669
4646
4686
4695
4566
5443
5475
5422
5486
5485
5473
5477
5278
5164
5687
5751
5368
4974
4973
5001
4732
5474
5201
5707-1
5624
4987
5238-1
5225
4707
4617
5720
5481
5480
5520
5250
4932
5673
5602
5660
5689
5676
5693
5682
5448
4837-2
4837-1
5622
5500
5425
5256
4741
5229
5714
4917
5377
5195
5029
4800
5633
5439
5198
5169
5173
5021
5301
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Chart 10



1 2 3 4 5 6 7 8 9 10
2
13h
11h
1
10h
14h
12h
Ursa Minor
Draco
Ursa Major
Canes Venatici
Ursa Major
70°
65°
60°
55°
50°
45°
6
11
26
27
28
κ
λ
Giausar
Dubhe
α
Merak
β
Megrez
δ
Alioth
ε
Phecda
γ
χ
IC 2574 - Coddington's Nebula
M 82
3077
M 108
M 97 - Owl Nebula
M 109
M 106
Cr 285 - Ursa Major Moving Cluster
chart A1
Abell 1377
Abell 1314
IC 708 Papillon
IC 712
IC 709
NGC 3928 - Miniature Spiral
MCG +09-20-046
MCG +09-20-052
MCG +10-19-040
PGC 93115
UGC 7490
UGC 6711
UGC 8201
UGC 7941
UGC 7179
UGC 7020
UGC 8237
UGC 6429
UGC 6534
UGC 6520
UGC 6452
UGC 6732
UGC 7534
UGC 6912
UGC 6767
UGC 8058
UGC 8146
UGC 6446
UGC 6983
UGC 6840
UGC 6667
UGC 6399
UGC 6162
UGC 6917
UGC 7367
UGC 6930
UGC 7639
UGC 7408
UGC 6628
UGC 6255
UGC 6135
UGC 6187
UGC 5612
UGC 5692
UGC 5688
IC 954
IC 836
IC 758
IC 852
IC 875
IC 691
IC 830
IC 801
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Chart 11

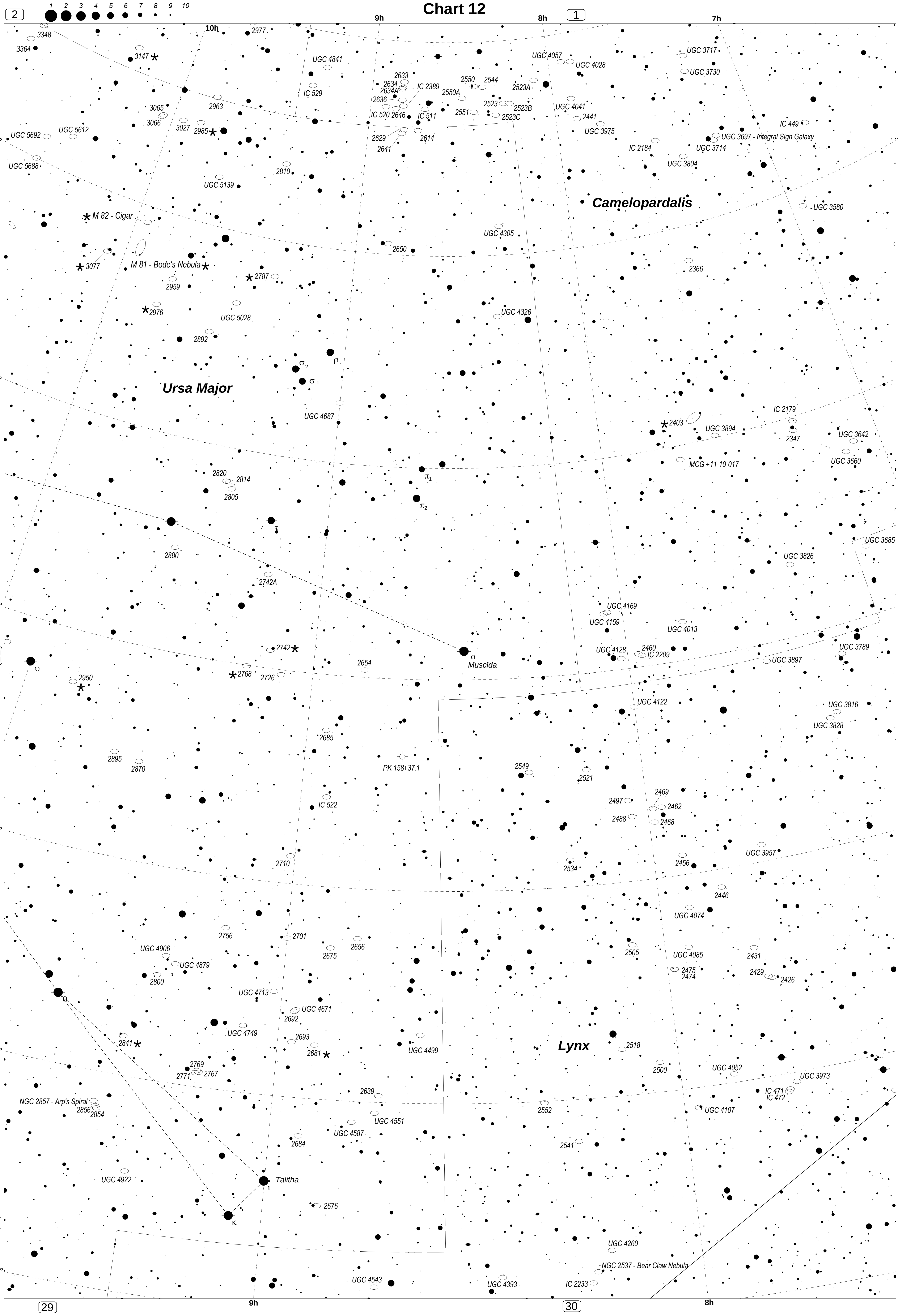


2
1 2 3 4 5 6 7 8 9 10
1
12h
11h
10h
9h
Draco
Cam
Ursa Major
Ursa Major
70°
65°
60°
55°
50°
45°
Giausar
λ
Dubhe
α
Merak
β
ρ
σ2
σ1
π1
π2
τ
υ
φ
θ
M 82 - Cigar
M 81 - Bode's Nebula
IC 2574 - Coddington's Nebula
M 108
M 97 - Owl Nebula
NGC 2857 - Arp's Spiral
UGC 4841
IC 529
IC 2389
IC 511
IC 520
UGC 4305
UGC 5612
UGC 5692
UGC 5688
UGC 5139
UGC 6711
UGC 5028
UGC 4687
UGC 6429
UGC 6534
UGC 6520
UGC 6452
IC 691
UGC 5435
UGC 5459
UGC 5734
UGC 5460
UGC 6162
UGC 5998
UGC 6029
UGC 4906
UGC 4879
UGC 4922
UGC 6255
UGC 5604
UGC 6187
UGC 6135
3890
3752
3523
3465
2977
2633
2550A
2523C
2634
2634A
2551
2636
2646
2614
2629
2641
3155
3183
3144
3403
3252
3343
3147
3562
3516
3348
3364
2963
4250
3065
3066
3027
2985
2810
2650
4236-1
4120
4034
3735
4128
3961
3879
3654
2787
4108A
3077
2959
3622
3682
2976
2892
3392
3394
3259
3266
2814
2820
2805
3668
3762
3725
3359
2742A
2880
3796
3589
3471
3435
3407
2742
2768
2726
3770
3168
3102
2685
3757
3642
3470
3690A
3690B
3610
3043
2950
3683A
3669
3625
3613
3619
3408
3284
3674
3683
3488
3225
3182
2895
2870
3530
3440
3458
3445
3517-1
3188
3238
3220
3206
3164
3499
3264
3353
3398
3079
3073
3656
2756
3448
3657
3631
3549
3310
2800
6399
2841
3406-2
3406-1
3298
2856
2854
3583
3577
3595
3320
3111
3478
3191
3135
11h
10h
28
29
10
12
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Chart 12

11

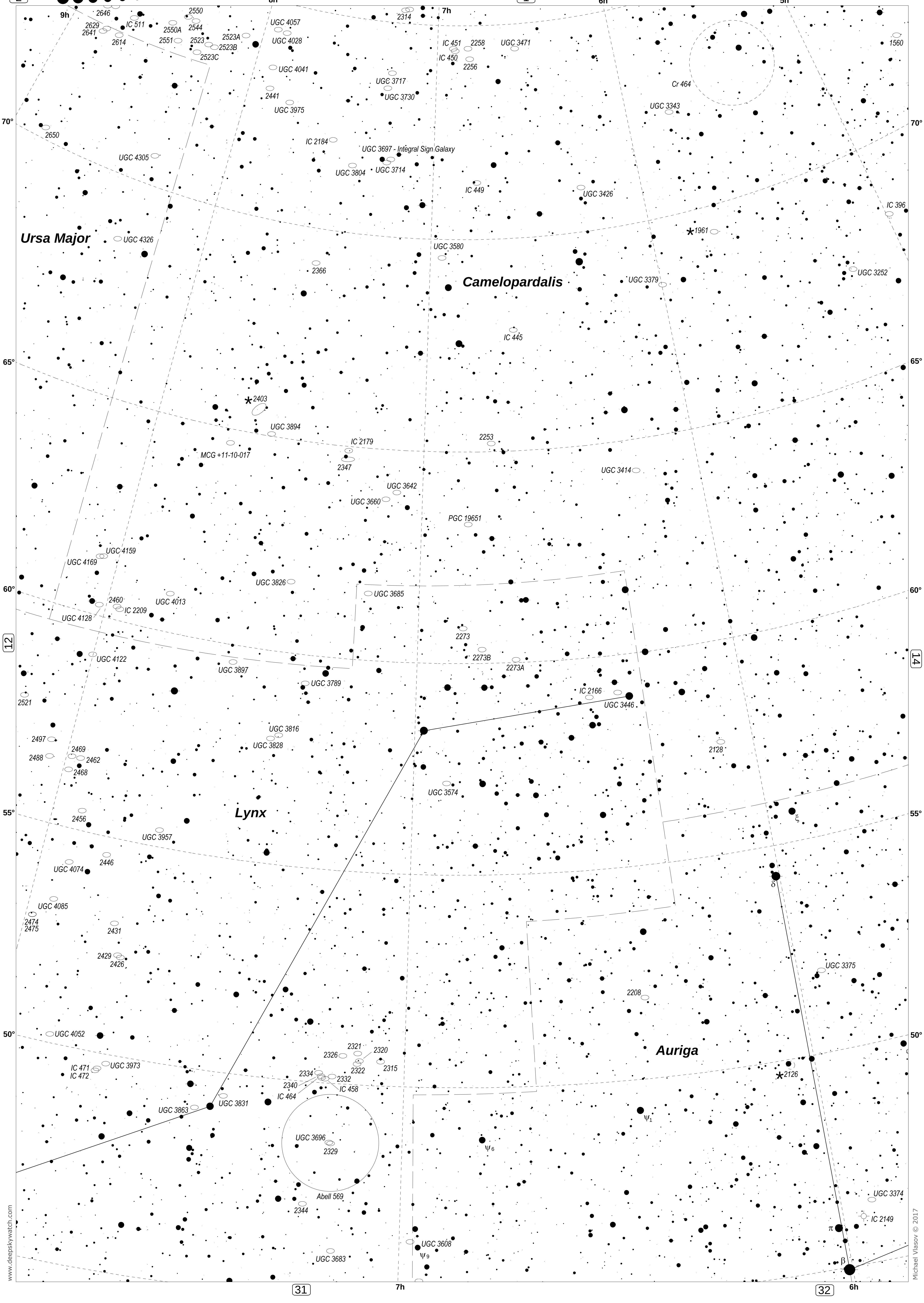
13



29

30

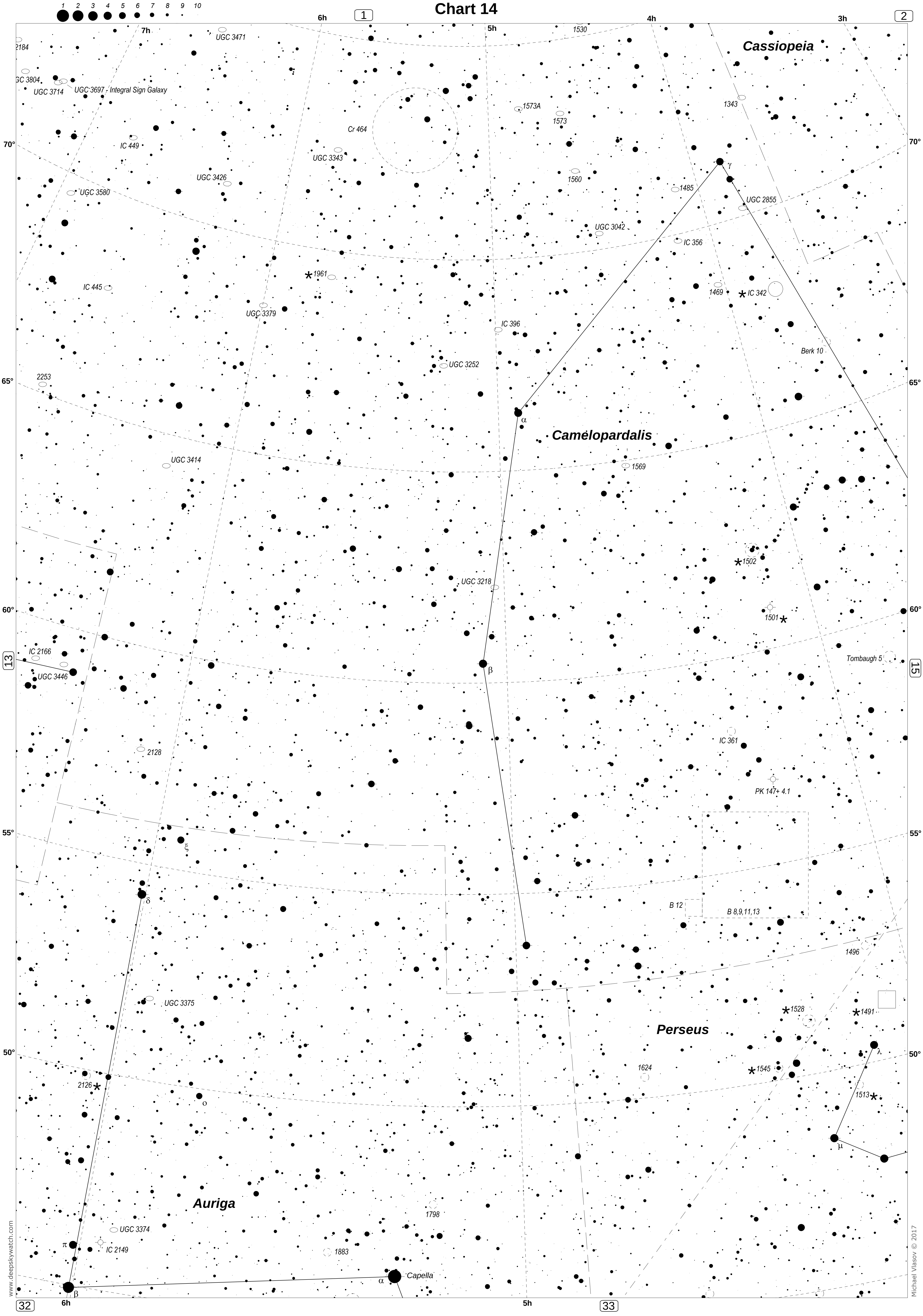
Chart 13



2
1 2 3 4 5 6 7 8 9 10
1
12
14
31
32
9h
8h
7h
6h
5h
70°
65°
60°
55°
50°
Ursa Major
Camelopardalis
Lynx
Auriga
2646
2629
2641
2614
IC 511
2550
2550A
2544
2551
2523
2523A
2523B
2523C
2650
UGC 4057
UGC 4028
UGC 4041
2441
UGC 3975
2314
IC 451
IC 450
2258
2256
UGC 3471
UGC 3717
UGC 3730
IC 2184
UGC 3697 - Integral Sign Galaxy
UGC 3804
UGC 3714
UGC 4305
IC 449
UGC 3426
Cr 464
UGC 3343
1560
IC 396
1961
UGC 4326
UGC 3580
2366
UGC 3379
UGC 3252
IC 445
2403
UGC 3894
MCG +11-10-017
IC 2179
2347
2253
UGC 3414
UGC 3642
UGC 3660
PGC 19651
UGC 4159
UGC 4169
UGC 3826
UGC 3685
2460
IC 2209
UGC 4013
UGC 4128
2273
2273B
2273A
UGC 4122
UGC 3897
UGC 3789
IC 2166
UGC 3446
2521
UGC 3816
UGC 3828
2497
2469
2488
2462
2468
2128
UGC 3574
2456
UGC 3957
ξ
UGC 4074
2446
δ
UGC 4085
2474
2475
2431
2429
2426
UGC 3375
2208
UGC 4052
2321
2320
2326
2322
2315
IC 471
IC 472
UGC 3973
2334
2332
2340
IC 458
IC 464
2126
UGC 3863
UGC 3831
ψ1
UGC 3696
2329
ψ6
Abell 569
2344
UGC 3374
IC 2149
π
UGC 3608
ψ9
UGC 3683
β
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Chart 14

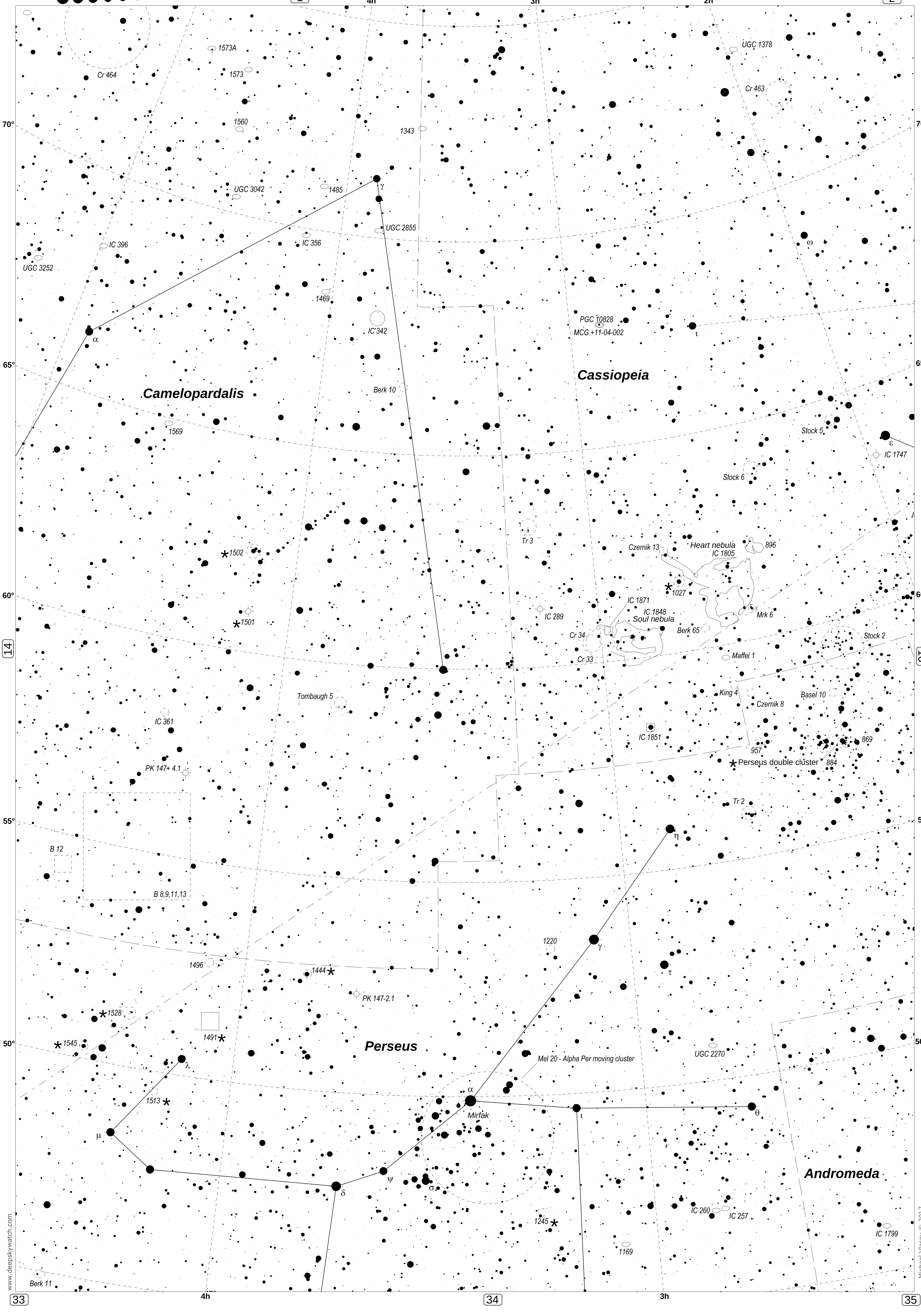
1 2 13 15 32 33



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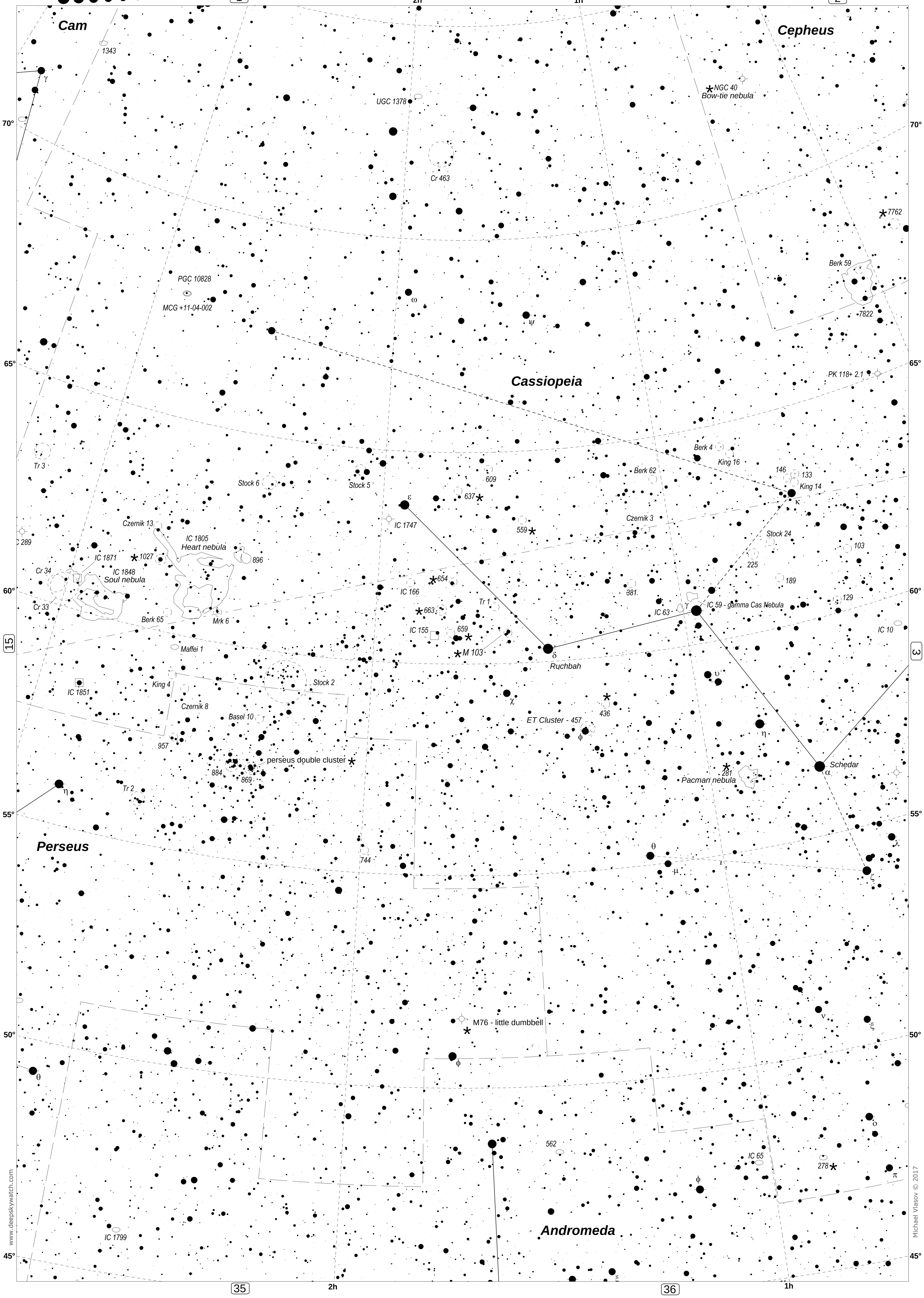
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Chart 15



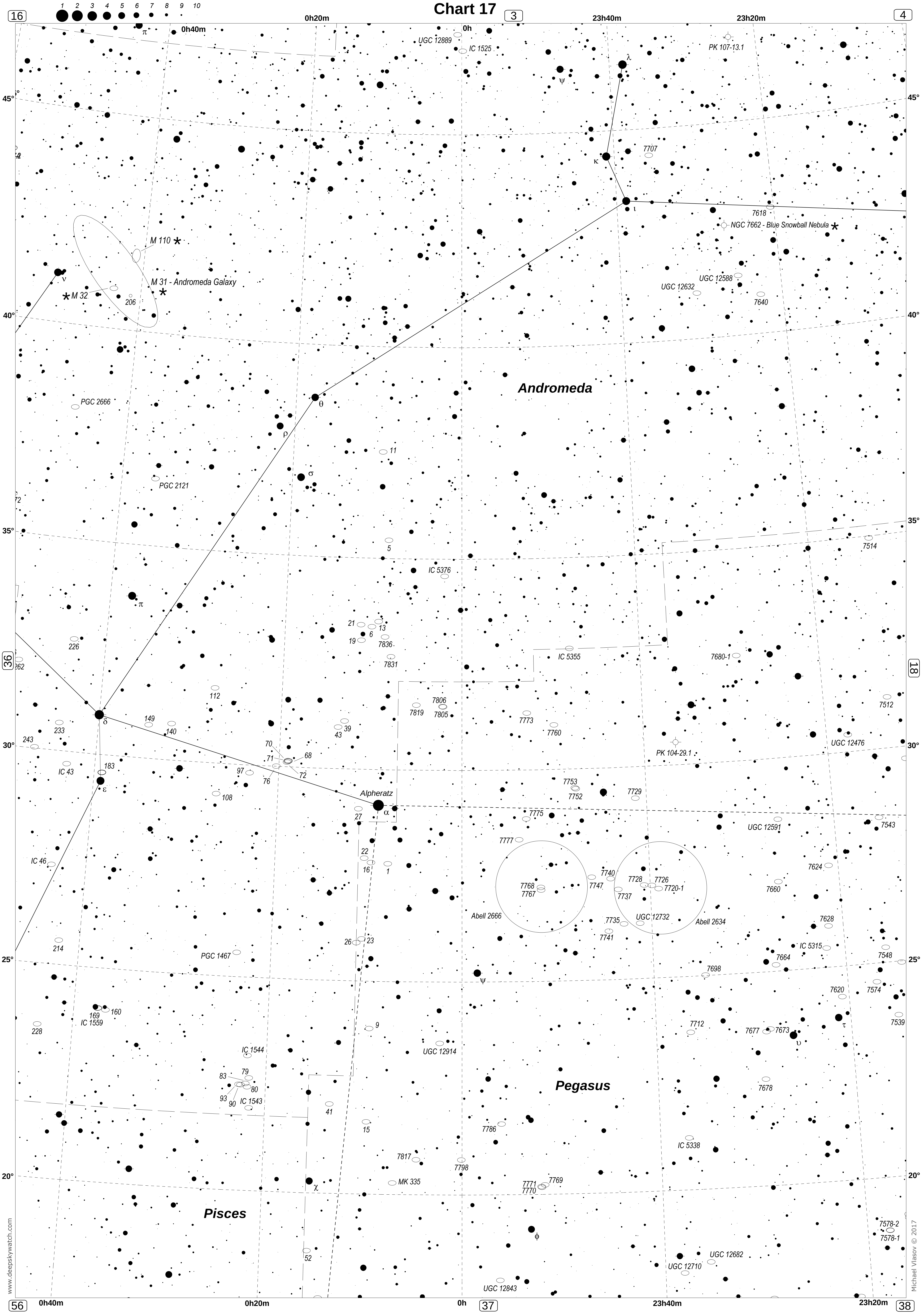
1 2 3 4 5 6 7 8 9 10
1
2
14
16
33
34
35
4h
3h
2h
70°
65°
60°
55°
50°
Camelopardalis
Cassiopeia
Perseus
Andromeda
Cr 464
1573A
1573
1560
1343
UGC 1378
Cr 463
UGC 3042
1485
UGC 2855
IC 396
IC 356
UGC 3252
1469
IC 342
PGC 10828
MCG +11-04-002
Berk 10
1569
Stock 5
IC 1747
Stock 6
Tr 3
Heart nebula
Czernik 13
IC 1805
896
1502
1027
IC 1871
IC 1848
Soul nebula
IC 289
1501
Cr 34
Cr 33
Berk 65
Mrk 6
Stock 2
Maffei 1
Tombaugh 5
King 4
Czernik 8
Basel 10
IC 361
IC 1851
869
957
884
PK 147+ 4.1
Perseus double cluster
Tr 2
B 12
B 8,9,11,13
1220
1496
1444
PK 147-2.1
1528
1491
1545
UGC 2270
Mel 20 - Alpha Per moving cluster
1513
Mirfak
IC 260
IC 257
1245
1169
IC 1799
Berk 11
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Chart 16



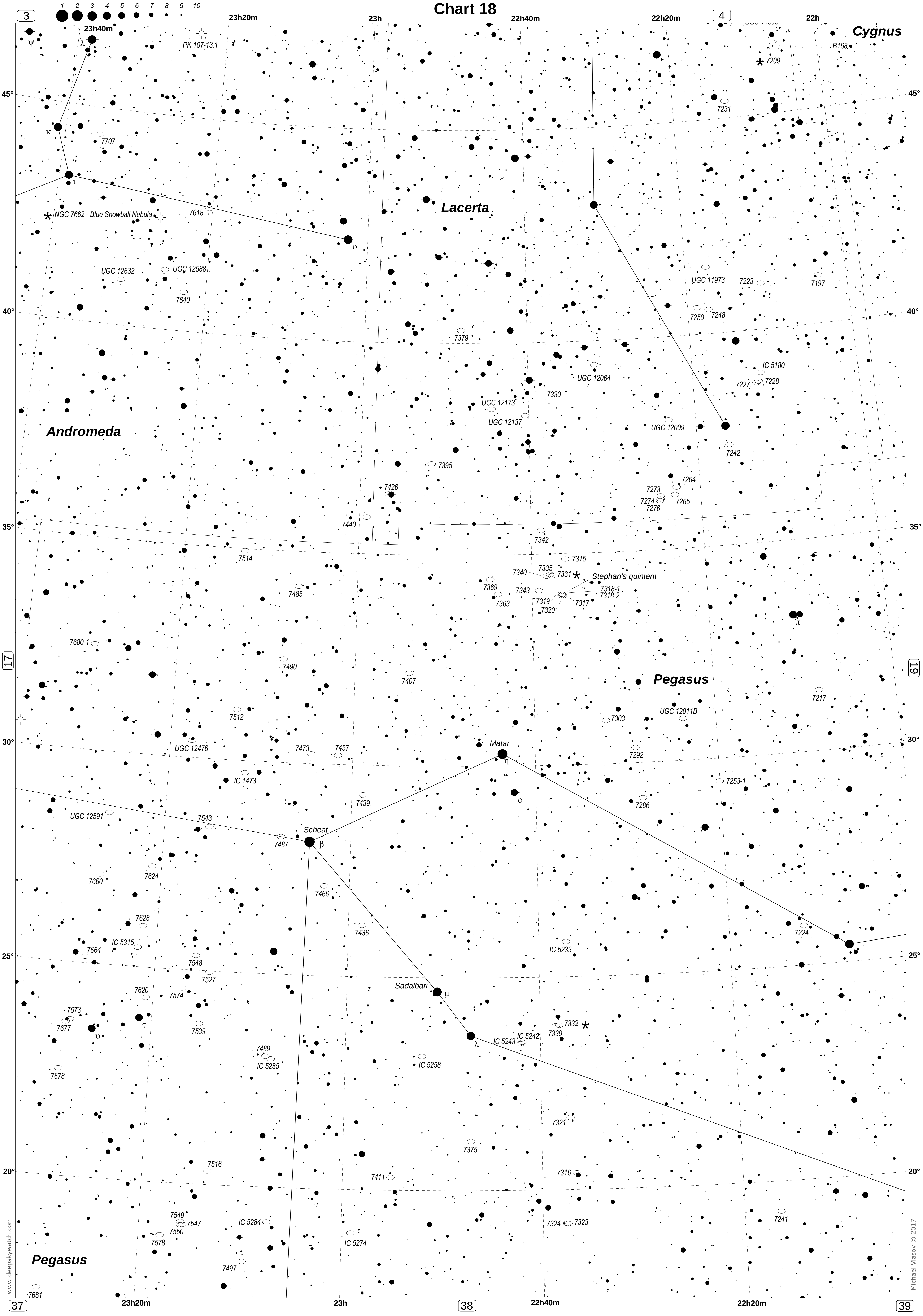
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Chart 17



16 3 4 36 18 56 37 38

Chart 18



1 2 3 4 5 6 7 8 9 10
3
4
17
19
37
38
39
23h40m
23h20m
23h
22h40m
22h20m
22h
45°
40°
35°
30°
25°
20°
Cygnus
Lacerta
Andromeda
Pegasus
Pegasus
PK 107-13.1
B168
7209
7231
7707
NGC 7662 - Blue Snowball Nebula
7618
UGC 12632
UGC 12588
7640
UGC 11973
7223
7197
7250
7248
7379
IC 5180
7227
7228
UGC 12064
7330
UGC 12173
UGC 12137
UGC 12009
7242
7395
7264
7273
7274
7276
7265
7426
7440
7342
7514
7315
7340
7335
7331
Stephan's quintent
7369
7343
7318-1
7318-2
7485
7363
7319
7320
7317
7680-1
7490
7407
7217
7512
7303
UGC 12011B
UGC 12476
7473
7457
Matar
7292
IC 1473
7253-1
7439
7286
UGC 12591
7543
Scheat
7487
7624
7660
7466
7628
7436
7224
IC 5315
7664
IC 5233
7548
7527
7620
7574
Sadalbari
7673
7677
7539
7332
7339
IC 5243
IC 5242
7489
IC 5285
IC 5258
7678
7321
7375
7516
7411
7316
7549
7547
7550
IC 5284
7578
IC 5274
7324
7323
7241
7497
7681
www.deepskywatch.com
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Chart 19

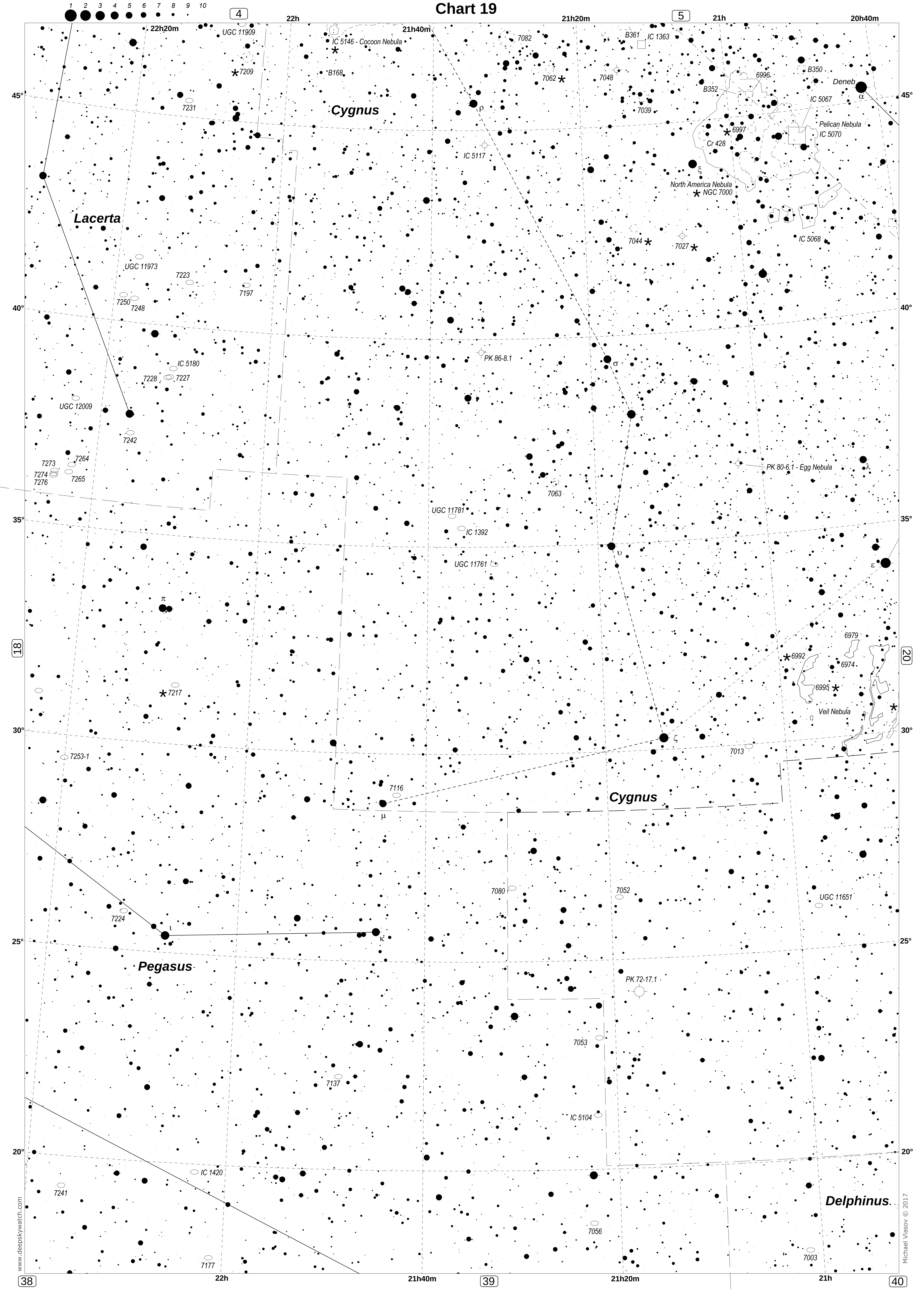
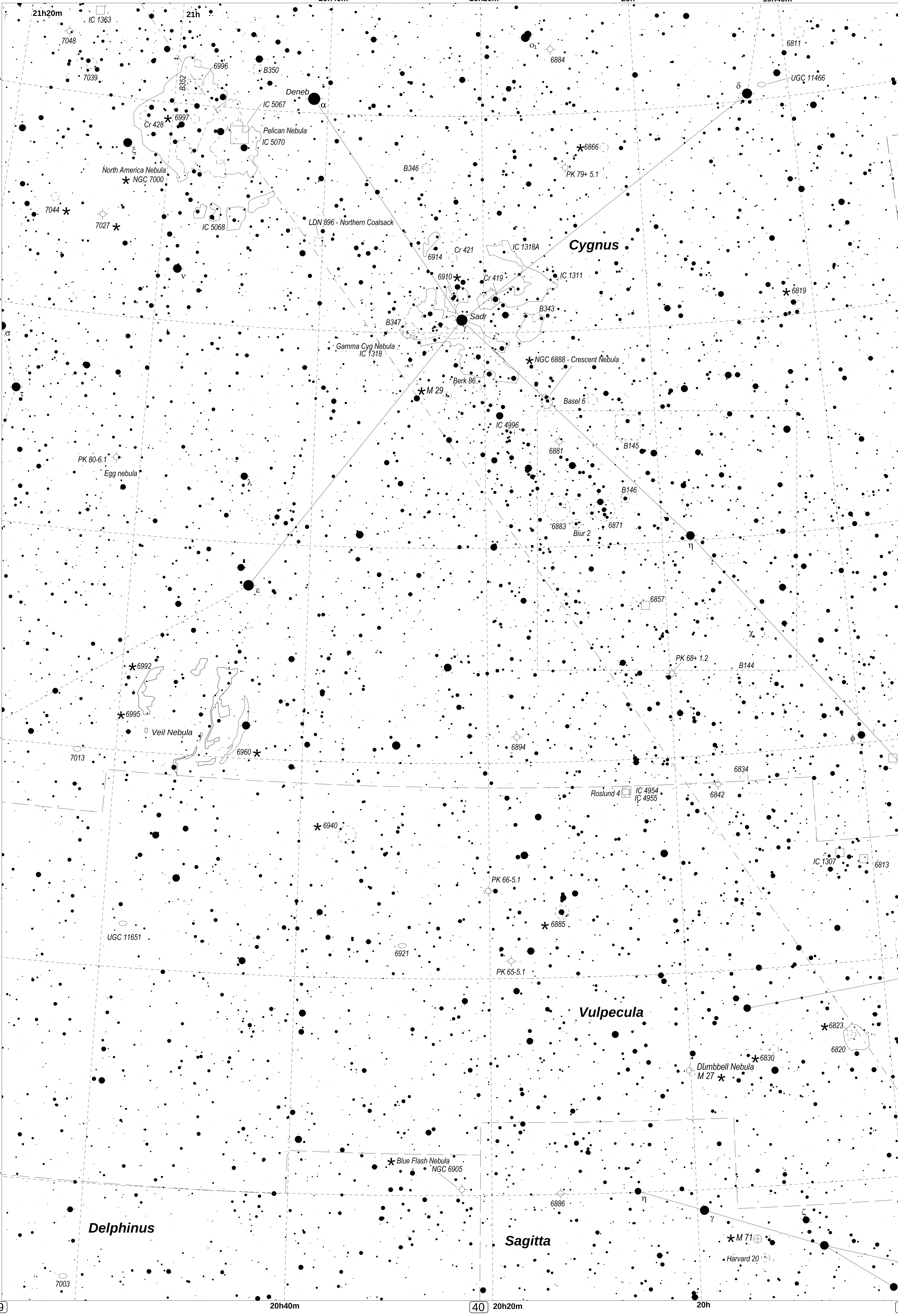

1 2 3 4 5 6 7 8 9 10
4
5
22h20m
22h
21h40m
21h20m
21h
20h40m
45°
40°
35°
30°
25°
20°
18
20
38
39
40
Cygnus
Lacerta
Pegasus
Delphinus
Deneb
UGC 11909
IC 5146 - Cocoon Nebula
7082
B361
IC 1363
7209
B168
7062
7048
6996
B350
B352
IC 5067
7231
7039
Pelican Nebula
IC 5070
6997
Cr 428
IC 5117
North America Nebula
NGC 7000
7044
7027
IC 5068
UGC 11973
7223
7197
7250
7248
IC 5180
7228
7227
PK 86-8.1
UGC 12009
7242
7273
7264
7274
7276
7265
PK 80-6.1 - Egg Nebula
7063
UGC 11781
IC 1392
UGC 11761
6979
6992
6974
6995
7217
Veil Nebula
7253-1
7013
7116
7080
7052
UGC 11651
7224
PK 72-17.1
7053
7137
IC 5104
IC 1420
7241
7056
7177
7003
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Chart 20

4 5 6

1 2 3 4 5 6 7 8 9

Tthis chart is limited to 9.8m stars to prevent clutter



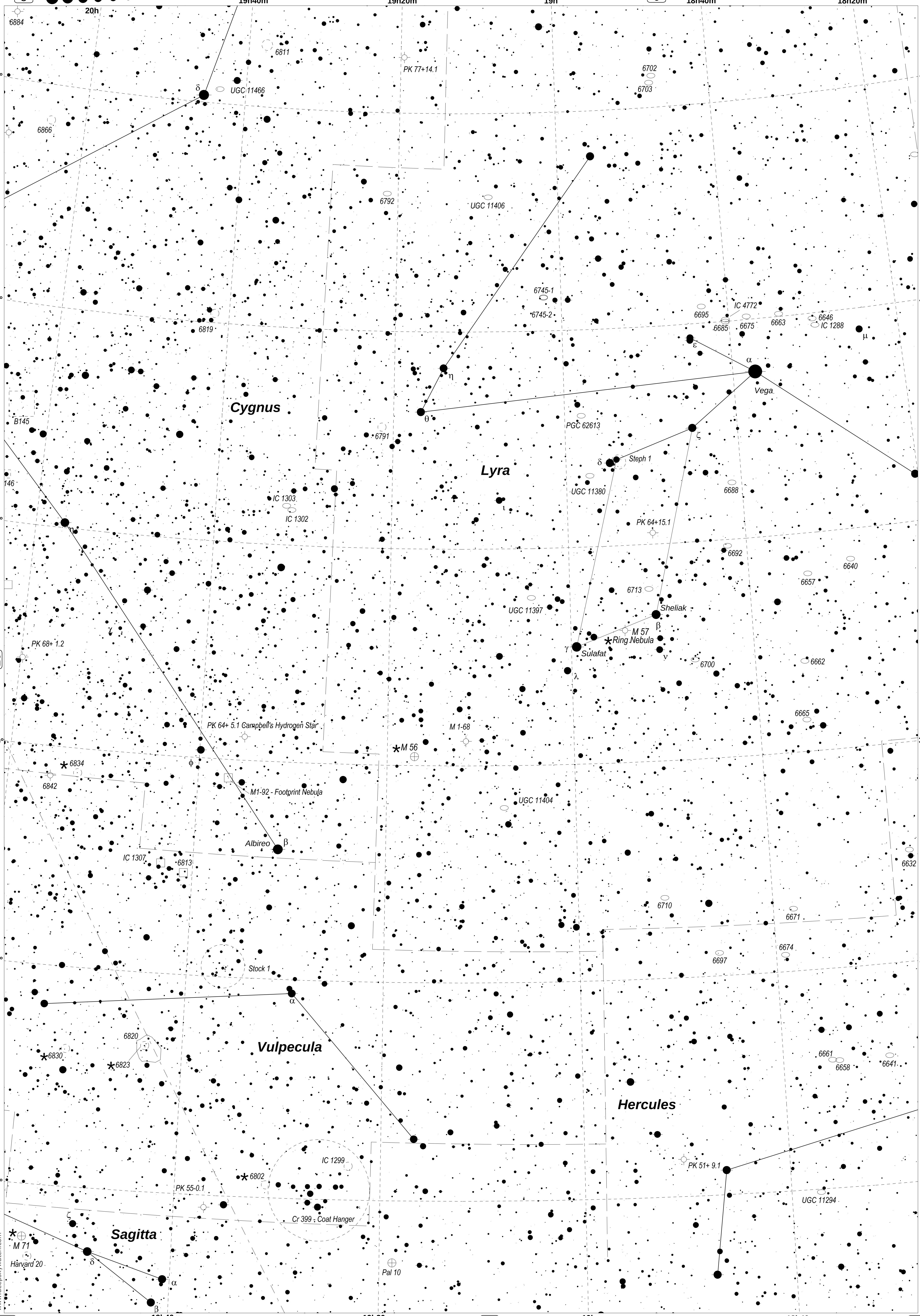
19 21

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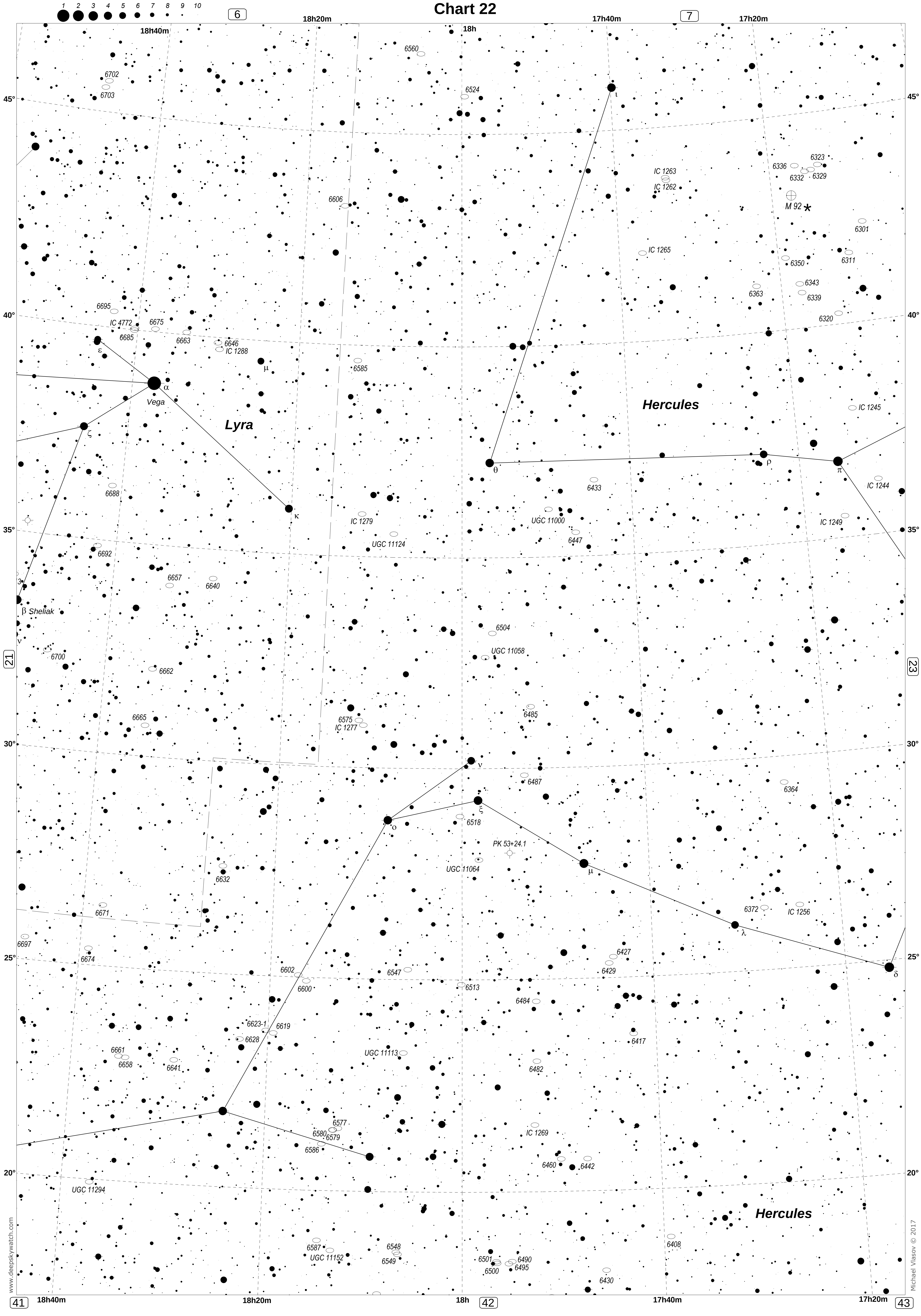
39 40 41

Chart 21



5
1 2 3 4 5 6 7 8 9 10
6
20h
19h40m
19h20m
19h
18h40m
18h20m
45°
40°
35°
30°
25°
20°
20
22
40
41
42
Cygnus
Lyra
Vulpecula
Hercules
Sagitta
Vega
Sheliak
Sulafat
Albireo
M 57
Ring Nebula
M 56
M 71
Harvard 20
Stock 1
Cr 399 - Coat Hanger
IC 1299
6802
PK 55-0.1
Pal 10
PK 51+ 9.1
UGC 11294
6884
6811
PK 77+14.1
6702
6703
UGC 11466
6866
6792
UGC 11406
6745-1
6745-2
6819
IC 4772
6695
6685
6675
6663
6646
IC 1288
B145
6791
PGC 62613
Steph 1
UGC 11380
6688
IC 1303
IC 1302
PK 64+15.1
6692
6640
6657
6713
UGC 11397
PK 68+ 1.2
6700
6662
6665
PK 64+ 5.1 Campbell's Hydrogen Star
M 1-68
6834
6842
M1-92 - Footprint Nebula
UGC 11404
IC 1307
6813
6632
6710
6671
6674
6697
6820
6830
6823
6661
6658
6641
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Chart 22



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Chart 23

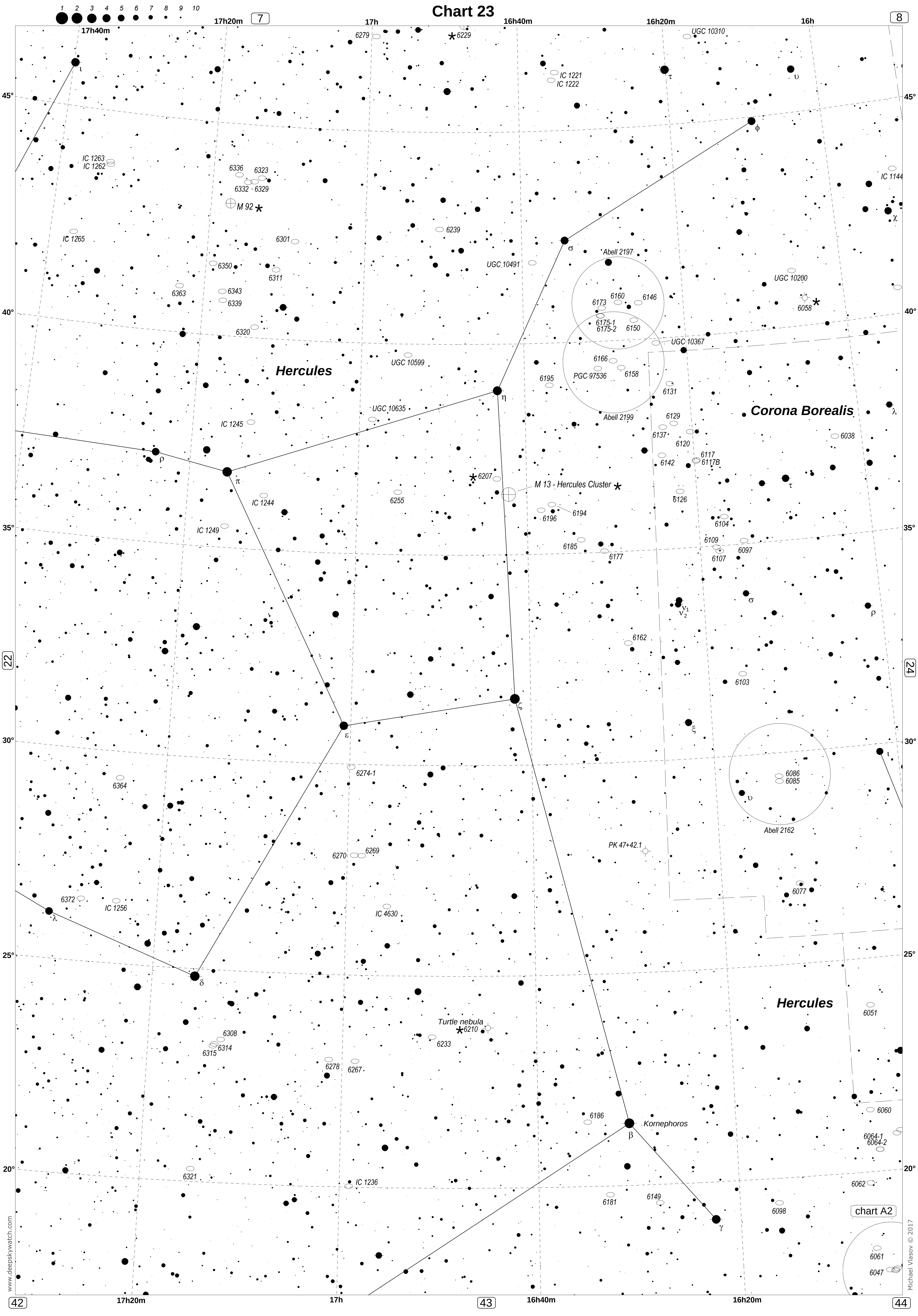
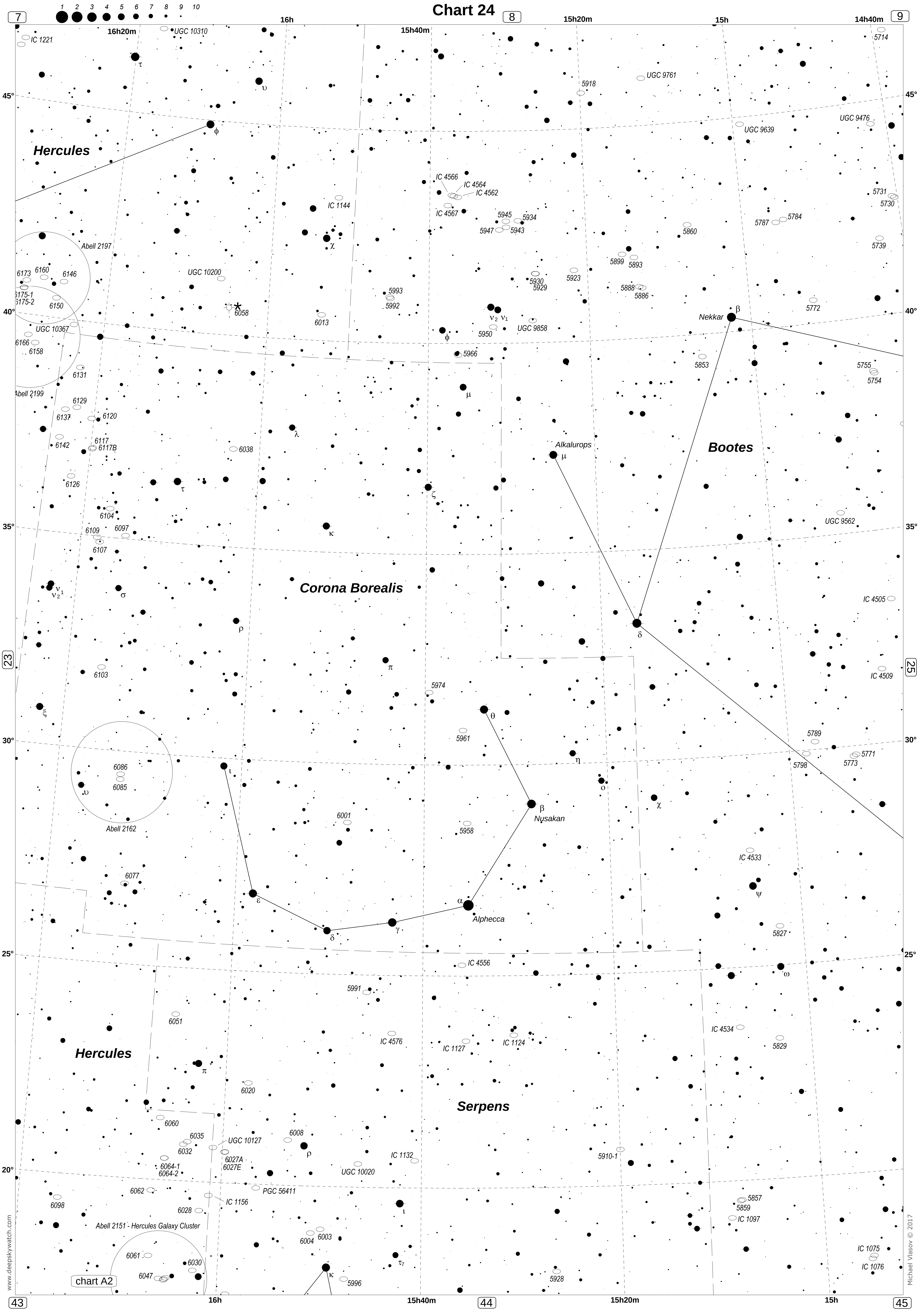
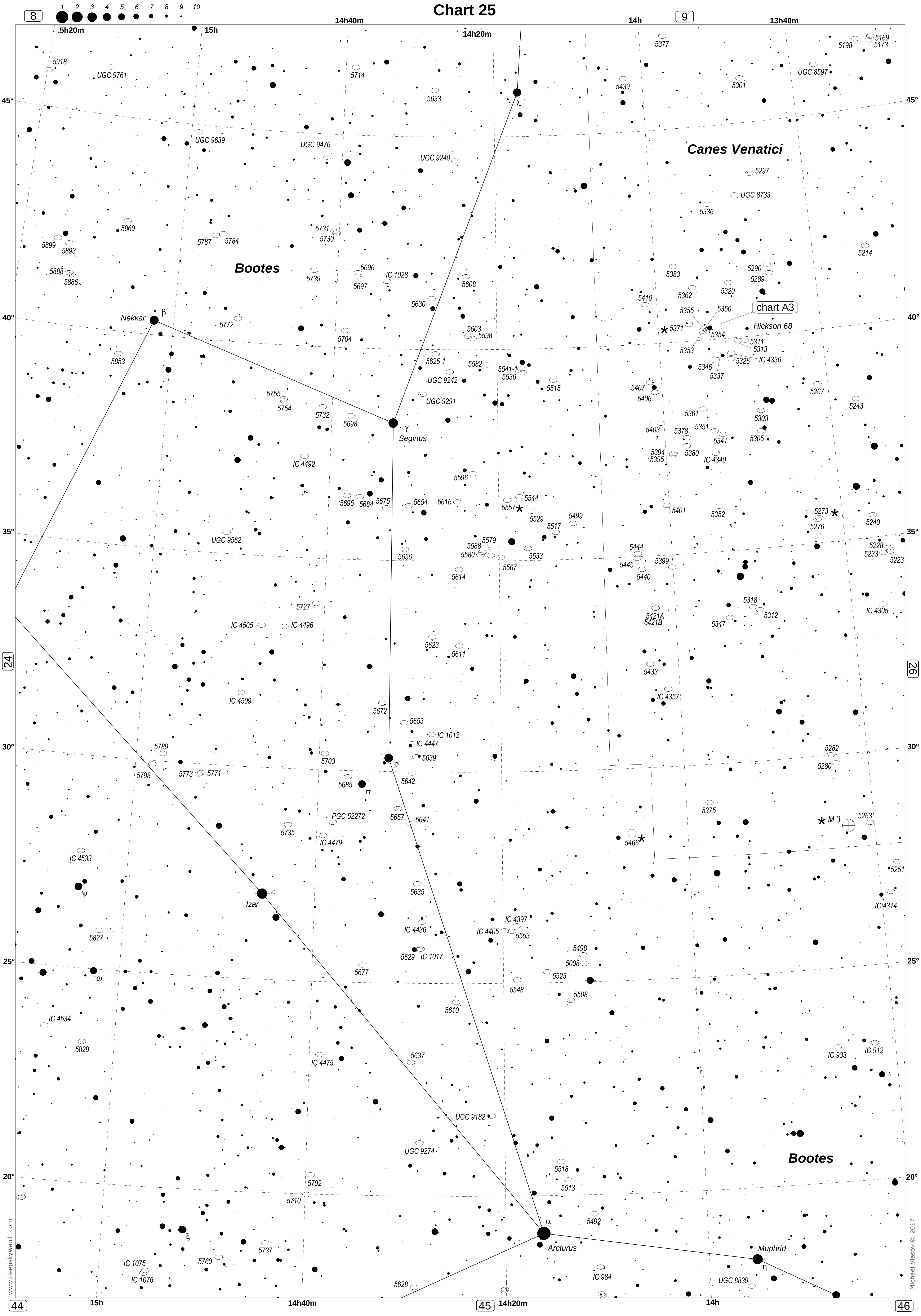

1 2 3 4 5 6 7 8 9 10
17h40m
17h20m
7
17h
16h40m
16h20m
16h
8
45°
40°
35°
30°
25°
20°
22
24
42
43
44
Hercules
Corona Borealis
Hercules
M 92
M 13 - Hercules Cluster
Turtle nebula
Kornephoros
Abell 2197
Abell 2199
Abell 2162
PK 47+42.1
IC 1263
IC 1262
IC 1265
IC 1221
IC 1222
IC 1144
IC 1245
IC 1244
IC 1249
IC 1256
IC 4630
IC 1236
UGC 10310
UGC 10491
UGC 10200
UGC 10367
UGC 10599
UGC 10635
PGC 97536
6279
6229
6336
6323
6332
6329
6301
6239
6350
6311
6363
6343
6339
6320
6173
6160
6146
6175-1
6175-2
6150
6058
6166
6158
6195
6131
6129
6137
6120
6117
6117B
6142
6038
6207
6255
6196
6194
6126
6104
6185
6177
6109
6107
6097
6162
6103
6086
6085
6274-1
6364
6270
6269
6077
6372
6051
6308
6315
6314
6233
6210
6278
6267
6186
6060
6064-1
6064-2
6321
6062
6181
6149
6098
6061
6047
chart A2
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Chart 24



7
8
9
23
25
43
44
45
1 2 3 4 5 6 7 8 9 10
16h20m
16h
15h40m
15h20m
15h
14h40m
45°
40°
35°
30°
25°
20°
Hercules
Corona Borealis
Bootes
Serpens
Alkalurops
Nekkar
Nusakan
Alphecca
IC 1221
UGC 10310
5714
UGC 9761
5918
UGC 9476
UGC 9639
IC 4566
IC 4564
IC 4562
IC 4567
IC 1144
5945
5934
5947
5943
5731
5730
5787
5784
5860
5739
Abell 2197
6173
6160
6146
6175-1
6175-2
6150
UGC 10200
6058
5993
5992
6013
5930
5929
5923
5899
5893
5888
5886
5772
UGC 10367
6166
6158
UGC 9858
5950
5966
5853
5755
5754
6131
Abell 2199
6129
6137
6120
6142
6117
6117B
6038
6126
6104
6109
6097
6107
UGC 9562
IC 4505
IC 4509
6103
5974
5961
5789
5771
5798
5773
6086
6085
Abell 2162
6001
5958
IC 4533
6077
5827
IC 4556
5991
6051
IC 4576
IC 1127
IC 1124
IC 4534
5829
6020
6060
6035
6032
UGC 10127
6008
6064-1
6064-2
6027A
6027E
IC 1132
UGC 10020
5910-1
6062
PGC 56411
IC 1156
6098
6028
5857
5859
IC 1097
Abell 2151 - Hercules Galaxy Cluster
6004
6003
6061
6030
6047
5996
5928
IC 1075
IC 1076
chart A2
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Chart 25



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Chart 26

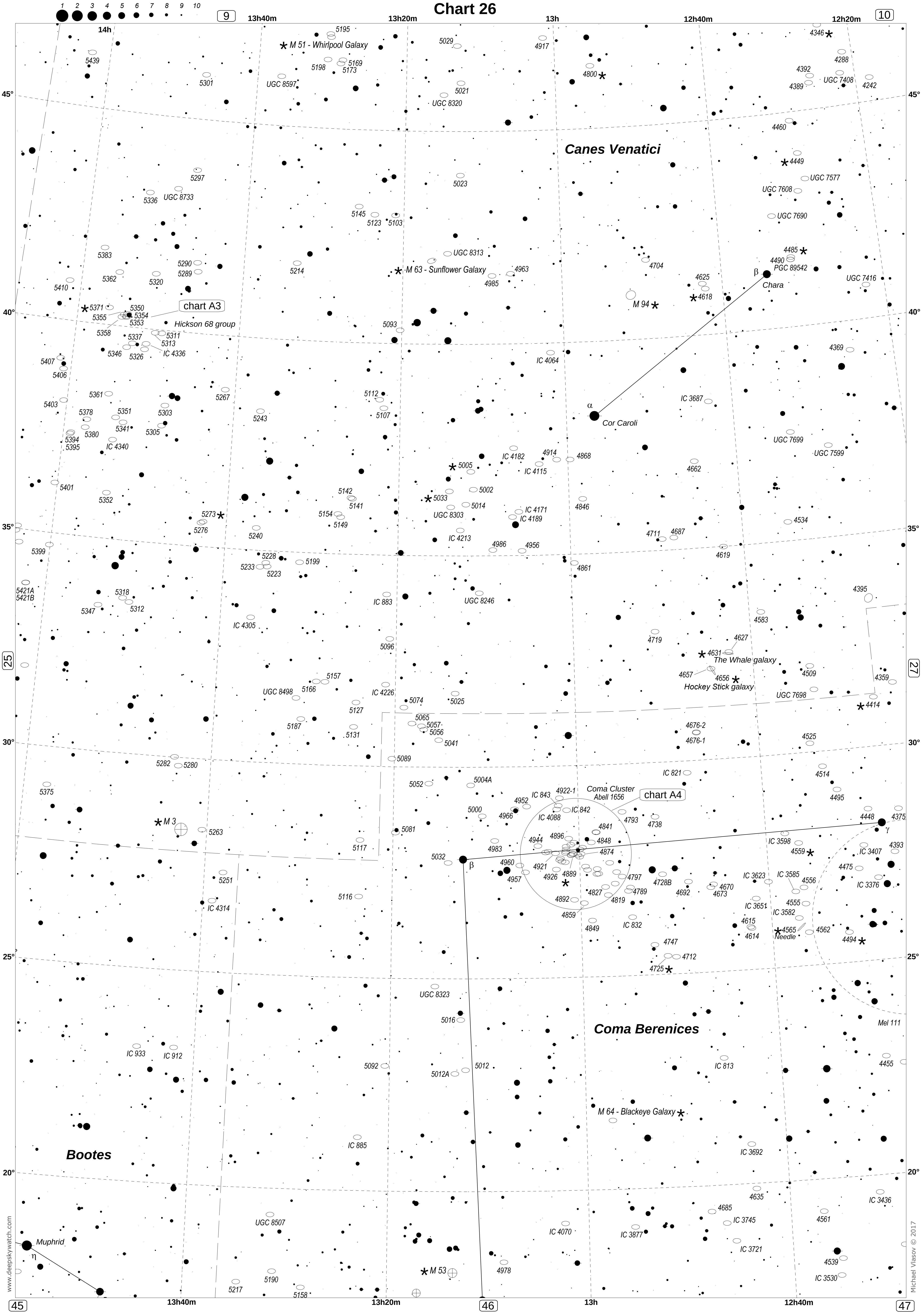

1 2 3 4 5 6 7 8 9 10
9
13h40m
13h20m
13h
12h40m
12h20m
10
14h
45°
40°
35°
30°
25°
20°
25
27
Canes Venatici
Coma Berenices
Bootes
M 51 - Whirlpool Galaxy
5195
5029
4917
4346
5439
5198
5169
5173
4288
5301
UGC 8597
5021
4800
4392
4389
UGC 7408
4242
UGC 8320
4460
4449
5297
UGC 7577
5336
UGC 8733
5023
UGC 7608
5145
5123
5103
UGC 7690
5383
UGC 8313
4485
4490
PGC 89542
5290
5289
5214
M 63 - Sunflower Galaxy
4963
4704
5362
5320
4985
4625
4618
β
Chara
UGC 7416
5410
M 94
5371
5350
5355
5354
5353
chart A3
Hickson 68 group
5093
5358
5337
5311
5313
IC 4336
5346
5326
5407
5406
IC 4064
4369
5267
5361
5112
IC 3687
5403
5378
5351
5303
5243
5107
α
Cor Caroli
5394
5395
5380
5341
5305
IC 4340
UGC 7699
UGC 7599
IC 4182
4914
4868
5005
IC 4115
4662
5401
5142
5002
5352
5141
5033
5014
4846
5273
5154
5149
UGC 8303
IC 4171
IC 4189
4534
5276
5240
IC 4213
4711
4687
5399
4986
4956
4619
5228
5233
5223
5199
4861
5421A
5421B
5318
5347
5312
IC 883
UGC 8246
4395
4583
IC 4305
4719
5096
4627
4631
The Whale galaxy
4657
4656
Hockey Stick galaxy
4509
4359
5157
5166
UGC 8498
IC 4226
5074
5025
UGC 7698
4414
5127
5065
5057
5056
4676-2
4676-1
5187
5131
5041
4525
5282
5280
5089
IC 821
4514
5375
5052
5004A
Coma Cluster
Abell 1656
chart A4
4922-1
IC 843
4952
IC 842
4495
M 3
5263
5000
4966
IC 4088
4793
4738
4448
4375
γ
4841
4896
5081
4944
4848
IC 3598
IC 3407
4393
5117
4983
4874
4559
5032
β
4960
4921
4957
4926
4889
4797
4728B
IC 3623
IC 3585
4475
IC 3376
5251
4556
4670
4673
4692
4827
4789
5116
4892
4819
IC 3651
4555
IC 4314
4859
IC 3582
4849
IC 832
4615
4614
4565
Needle
4562
4494
4747
4712
4725
UGC 8323
5016
Mel 111
IC 933
IC 912
5092
5012A
5012
IC 813
4455
M 64 - Blackeye Galaxy
IC 885
IC 3692
4635
IC 3436
UGC 8507
4685
IC 3745
4561
IC 4070
IC 3877
Muphrid
η
IC 3721
M 53
4539
4978
5190
5217
5158
IC 3530
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45
46
47
13h40m
13h20m
13h
12h40m

Chart 27

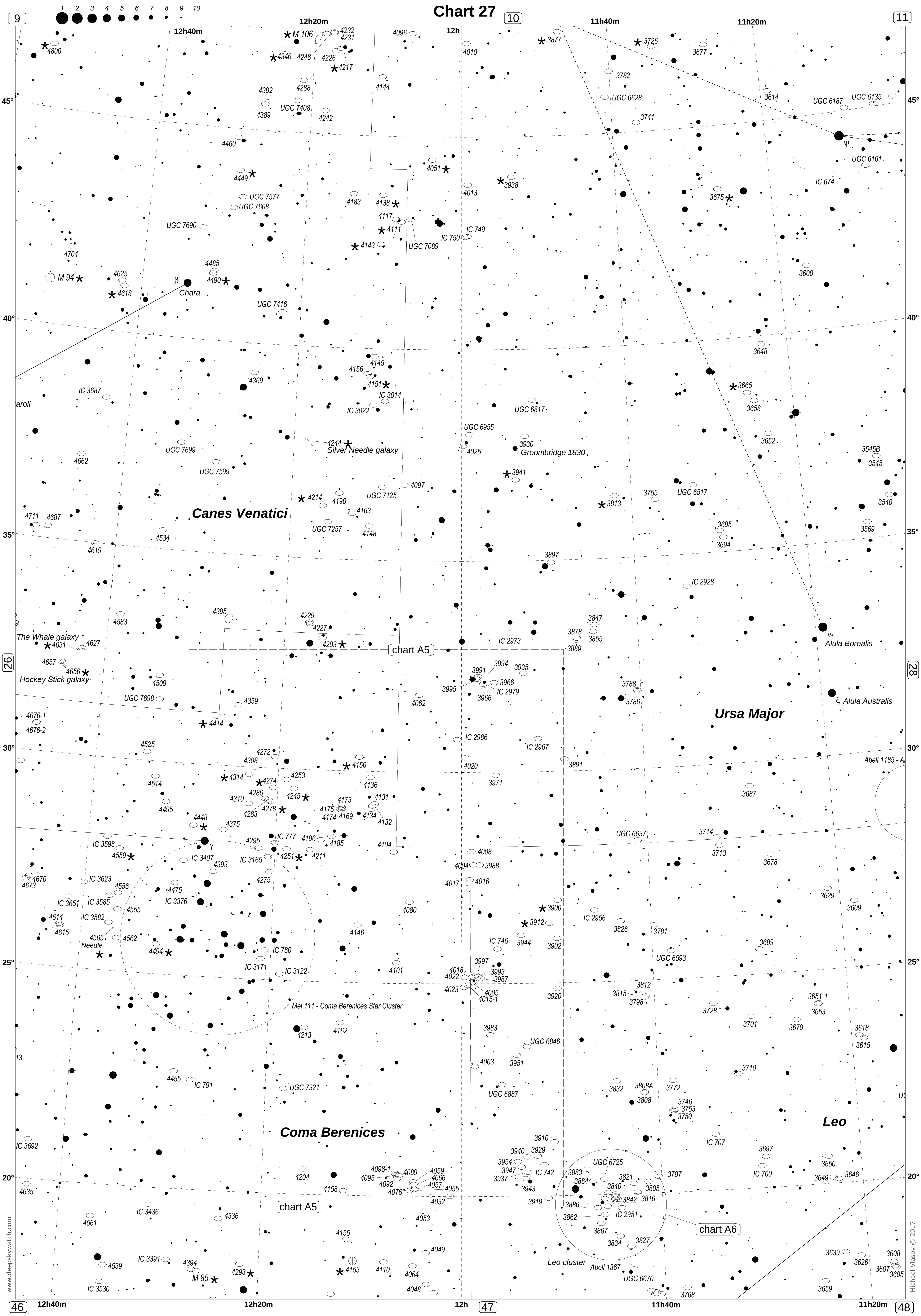

1 2 3 4 5 6 7 8 9 10
9
10
11
12h40m
12h20m
12h
11h40m
11h20m
45°
40°
35°
30°
25°
20°
26
28
46
47
48
Canes Venatici
Ursa Major
Coma Berenices
Leo
M 106
M 94
M 85
β
Chara
γ
ν
Alula Borealis
ξ
Alula Australis
ψ
Silver Needle galaxy
Groombridge 1830
The Whale galaxy
Hockey Stick galaxy
Needle
Mel 111 - Coma Berenices Star Cluster
Leo cluster
Abell 1367
Abell 1185
chart A5
chart A6
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Chart 28

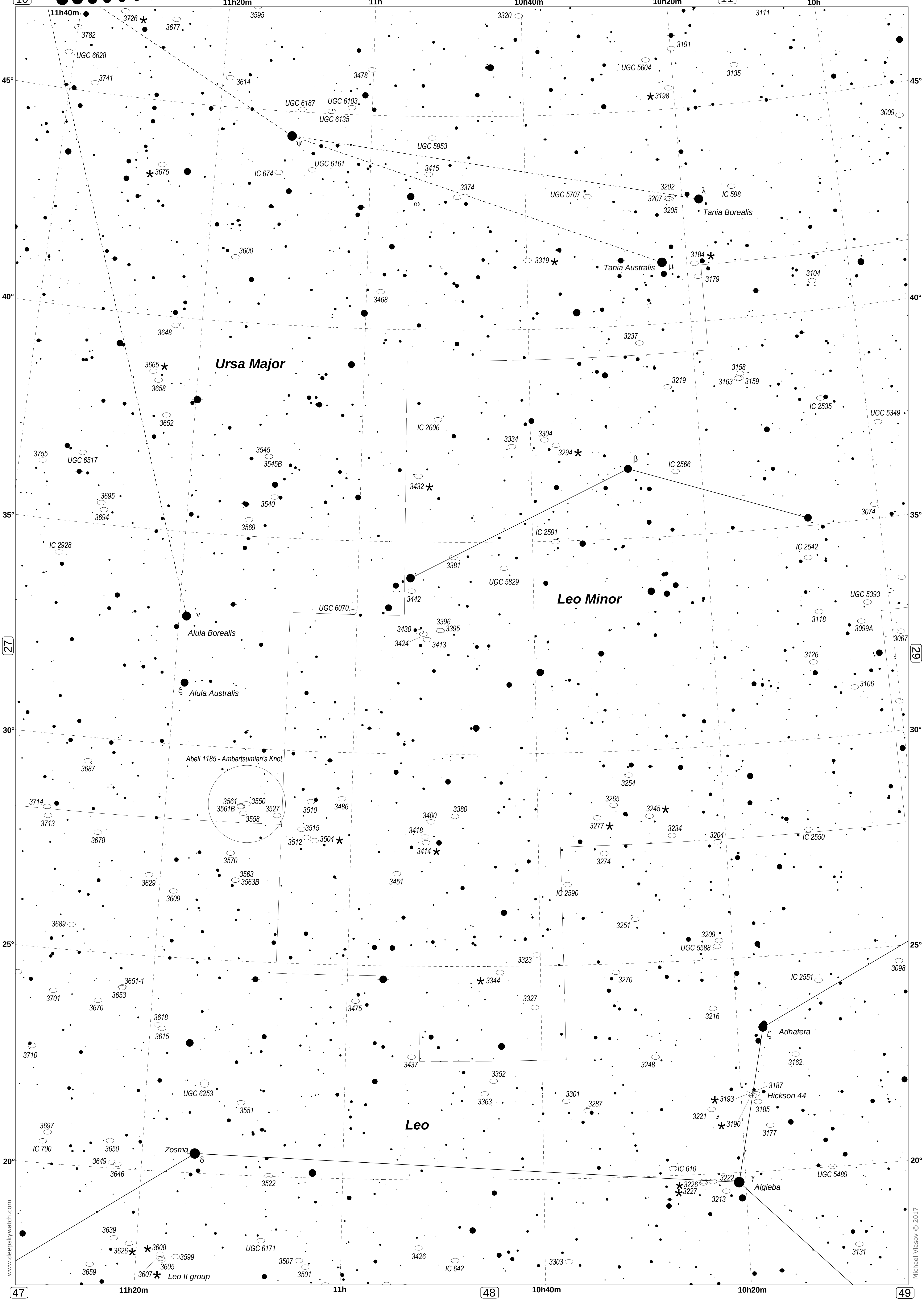

1 2 3 4 5 6 7 8 9 10
10
11
27
29
47
48
49
11h40m
11h20m
11h
10h40m
10h20m
10h
45°
40°
35°
30°
25°
20°
Ursa Major
Leo Minor
Leo
Tania Borealis
Tania Australis
Alula Borealis
Alula Australis
Adhafera
Algieba
Zosma
Hickson 44
Leo II group
Abell 1185 - Ambartsumian's Knot
UGC 6628
UGC 6187
UGC 6103
UGC 6135
UGC 5604
UGC 5953
UGC 6161
UGC 5707
IC 674
IC 598
UGC 6517
IC 2606
IC 2566
IC 2535
UGC 5349
IC 2928
IC 2591
IC 2542
UGC 5829
UGC 6070
UGC 5393
IC 2590
IC 2550
UGC 5588
IC 2551
UGC 6253
IC 700
IC 610
UGC 5489
UGC 6171
IC 642
3726
3677
3595
3320
3111
3782
3191
3741
3614
3478
3135
3198
3009
3675
3415
3374
3202
3207
3205
3600
3319
3184
3179
3104
3468
3648
3237
3665
3658
3158
3163
3159
3219
3652
3304
3334
3294
3545
3545B
3755
3432
3695
3694
3540
3569
3074
3381
3442
3396
3395
3430
3424
3413
3118
3099A
3067
3126
3106
3687
3254
3714
3713
3561
3561B
3550
3558
3527
3510
3486
3400
3380
3265
3245
3277
3234
3678
3515
3512
3504
3418
3414
3204
3570
3274
3563
3563B
3629
3609
3451
3689
3251
3209
3323
3098
3701
3651-1
3653
3670
3344
3270
3475
3327
3216
3618
3615
3710
3437
3248
3162
3352
3187
3363
3301
3287
3193
3185
3551
3221
3190
3177
3697
3650
3649
3646
3522
3222
3226
3227
3213
3639
3608
3626
3599
3605
3171
3426
3507
3303
3131
3659
3607
3501
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Chart 29

11 12 28 30 48 49 50

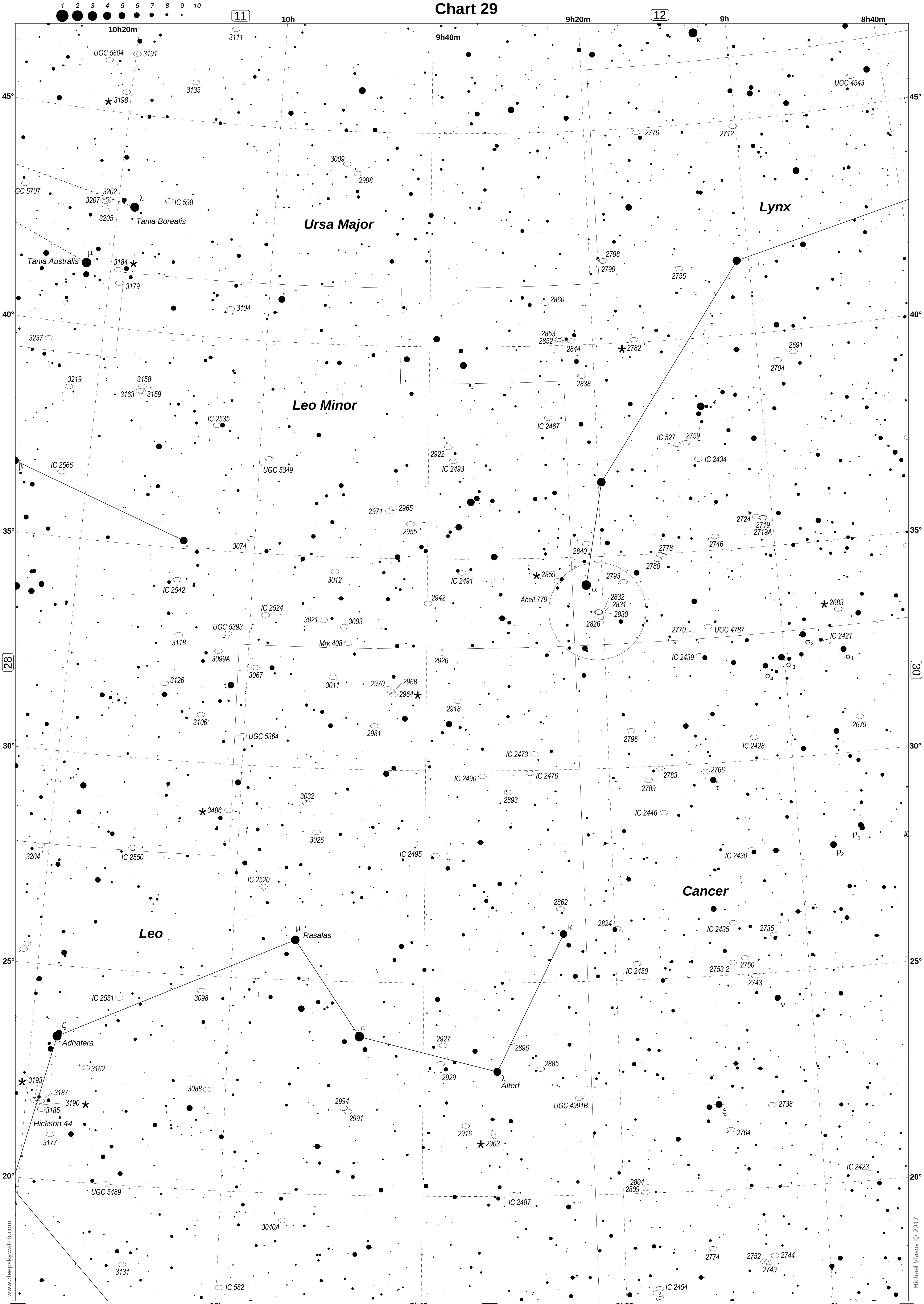
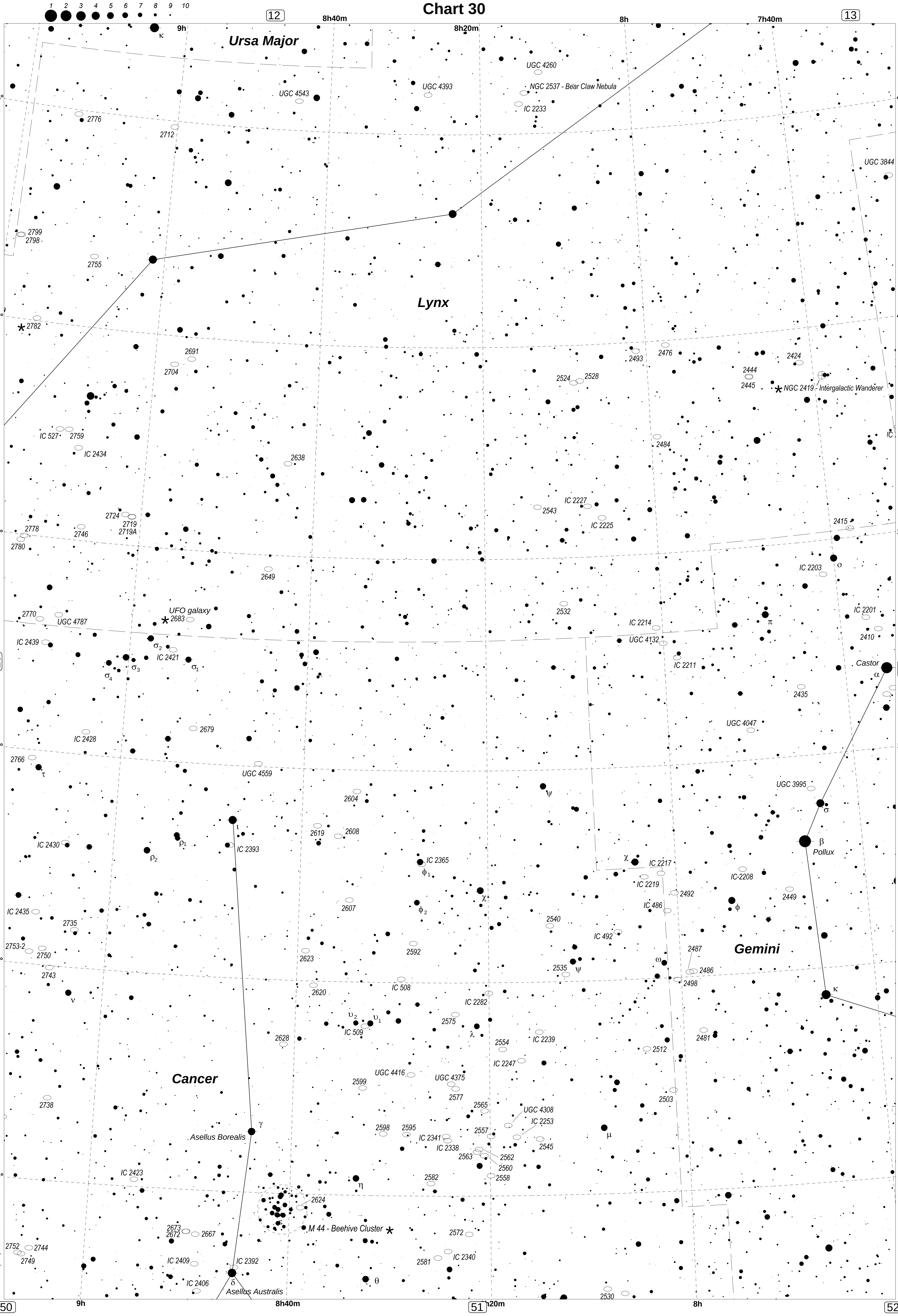


Chart 30



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Chart 31

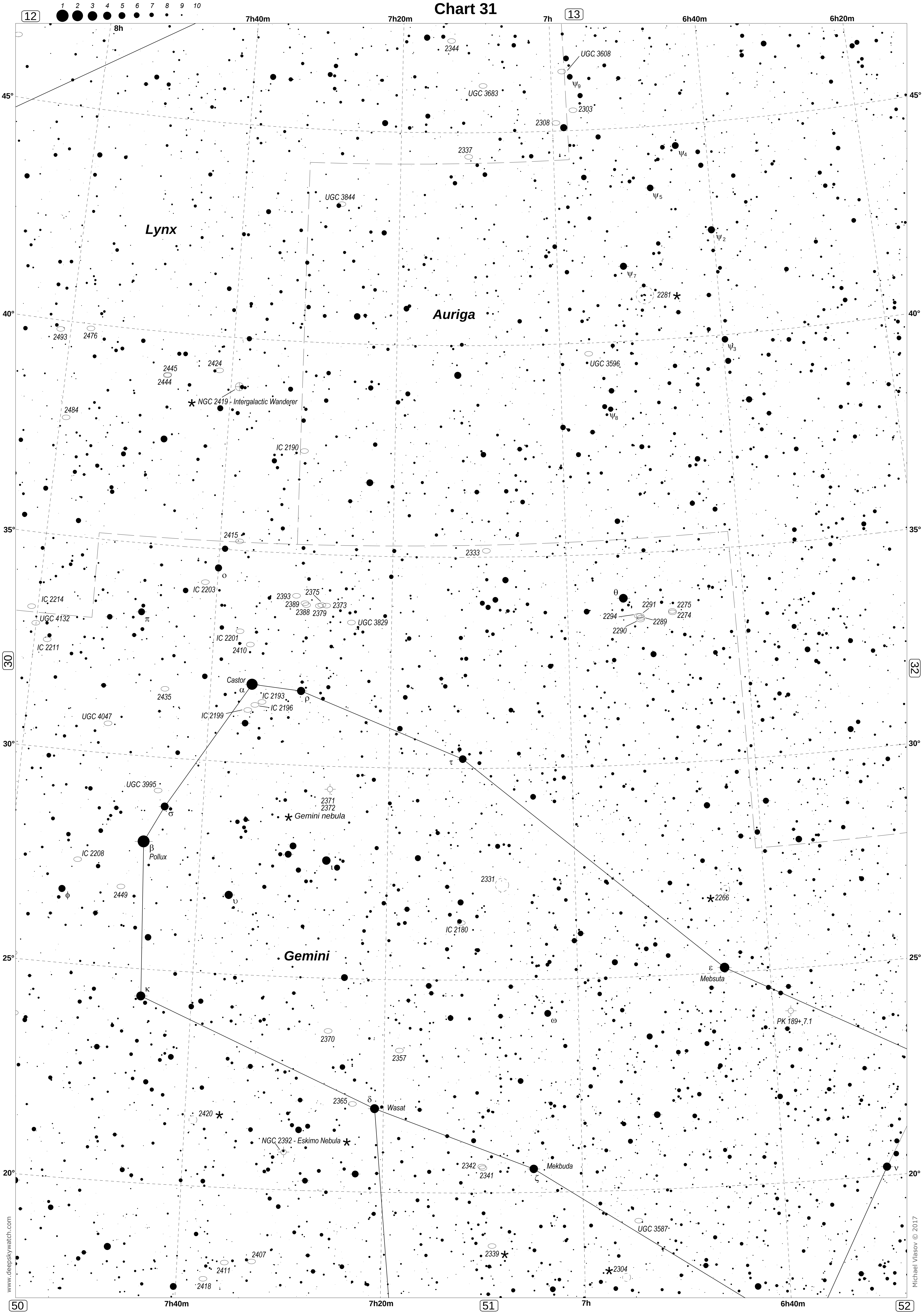
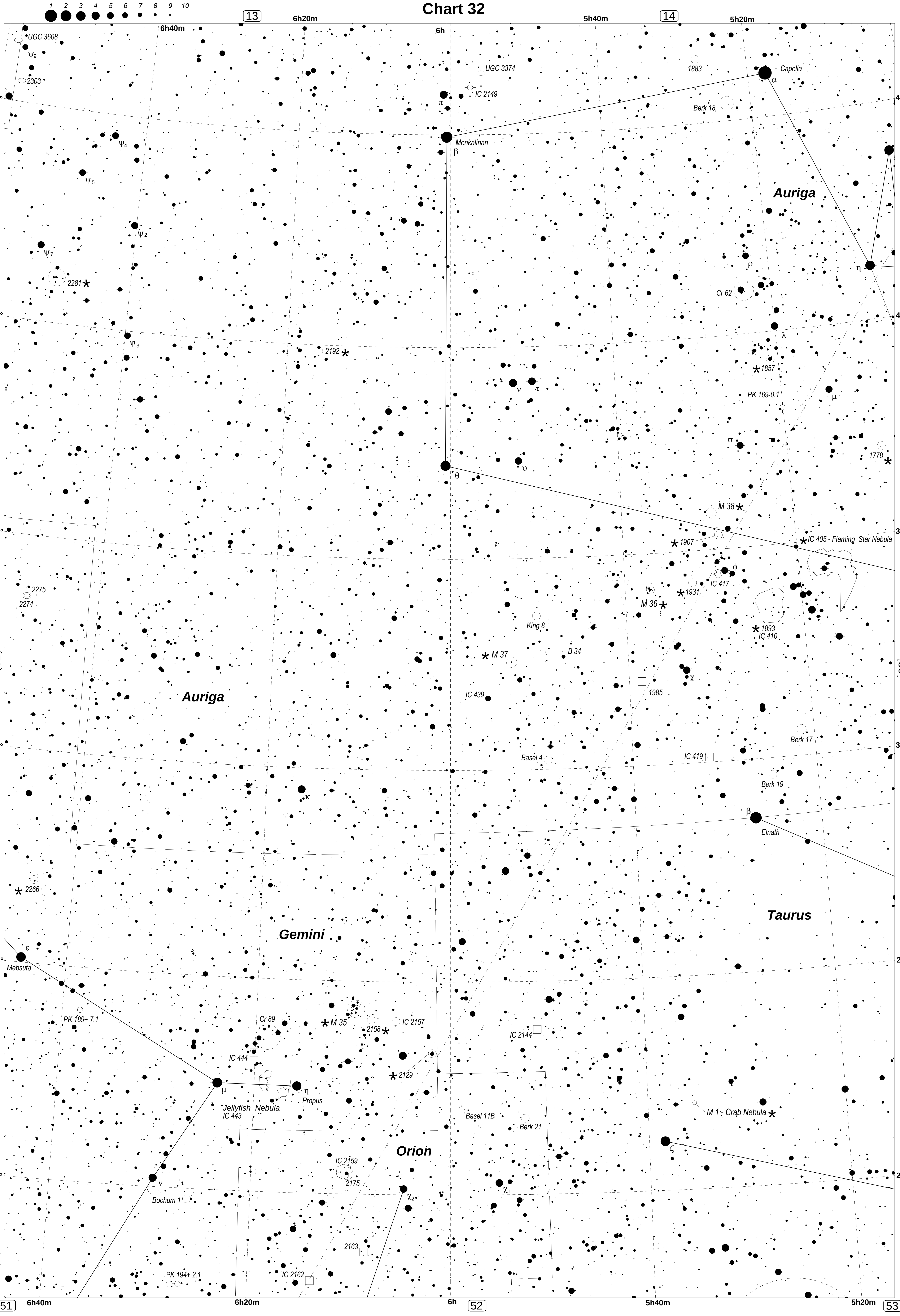

1 2 3 4 5 6 7 8 9 10
12
13
30
32
50
51
52
8h
7h40m
7h20m
7h
6h40m
6h20m
45°
40°
35°
30°
25°
20°
Lynx
Auriga
Gemini
UGC 3608
2344
UGC 3683
2303
2308
2337
UGC 3844
2281
2493
2476
2424
2445
2444
NGC 2419 - Intergalactic Wanderer
UGC 3596
2484
IC 2190
2415
2333
IC 2214
UGC 4132
IC 2211
IC 2203
2393
2375
2389
2388
2379
2373
UGC 3829
2291
2275
2294
2274
2289
2290
IC 2201
2410
Castor
IC 2193
IC 2196
IC 2199
2435
UGC 4047
UGC 3995
2371
2372
Gemini nebula
IC 2208
Pollux
2449
2331
2266
IC 2180
Mebsuta
PK 189+7.1
2370
2357
2365
Wasat
2420
NGC 2392 - Eskimo Nebula
2342
2341
Mekbuda
UGC 3587
2407
2411
2418
2339
2304
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Chart 32



1 2 3 4 5 6 7 8 9 10
13
14
31
33
51
52
53
6h40m
6h20m
6h
5h40m
5h20m
45°
40°
35°
30°
25°
20°
Auriga
Auriga
Gemini
Taurus
Orion
Capella
Menkalinan
Elnath
Mebsuta
Propus
UGC 3608
2303
UGC 3374
IC 2149
1883
Berk 18
2281
Cr 62
2192
1857
PK 169-0.1
1778
M 38
1907
IC 405 - Flaming Star Nebula
2275
2274
IC 417
1931
M 36
King 8
1893
IC 410
M 37
B 34
IC 439
1985
Berk 17
Basel 4
IC 419
Berk 19
2266
PK 189+ 7.1
Cr 89
M 35
2158
IC 2157
IC 444
IC 2144
2129
Jellyfish Nebula
IC 443
Basel 11B
Berk 21
M 1 - Crab Nebula
IC 2159
2175
Bochum 1
2163
PK 194+ 2.1
IC 2162
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Chart 33

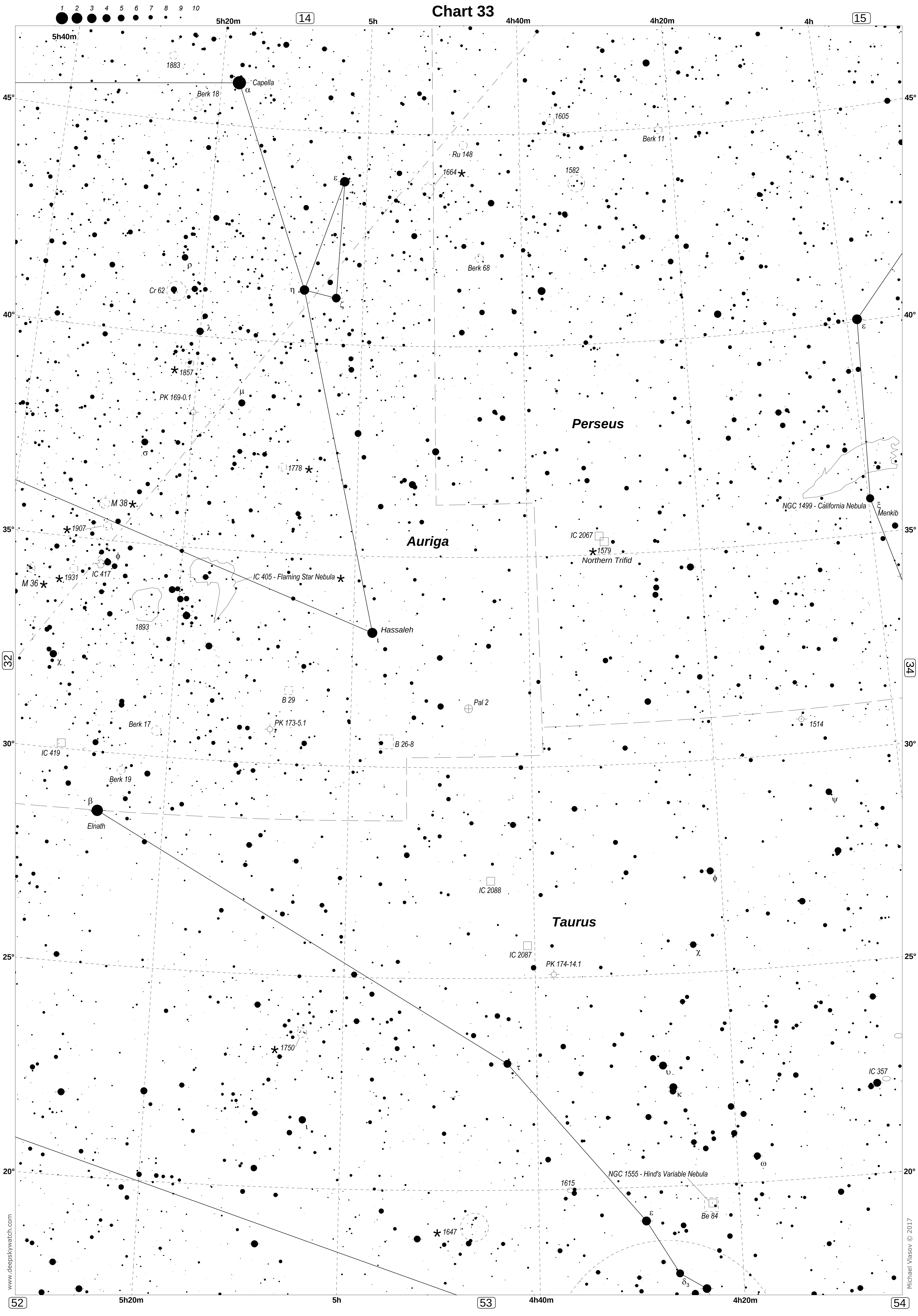
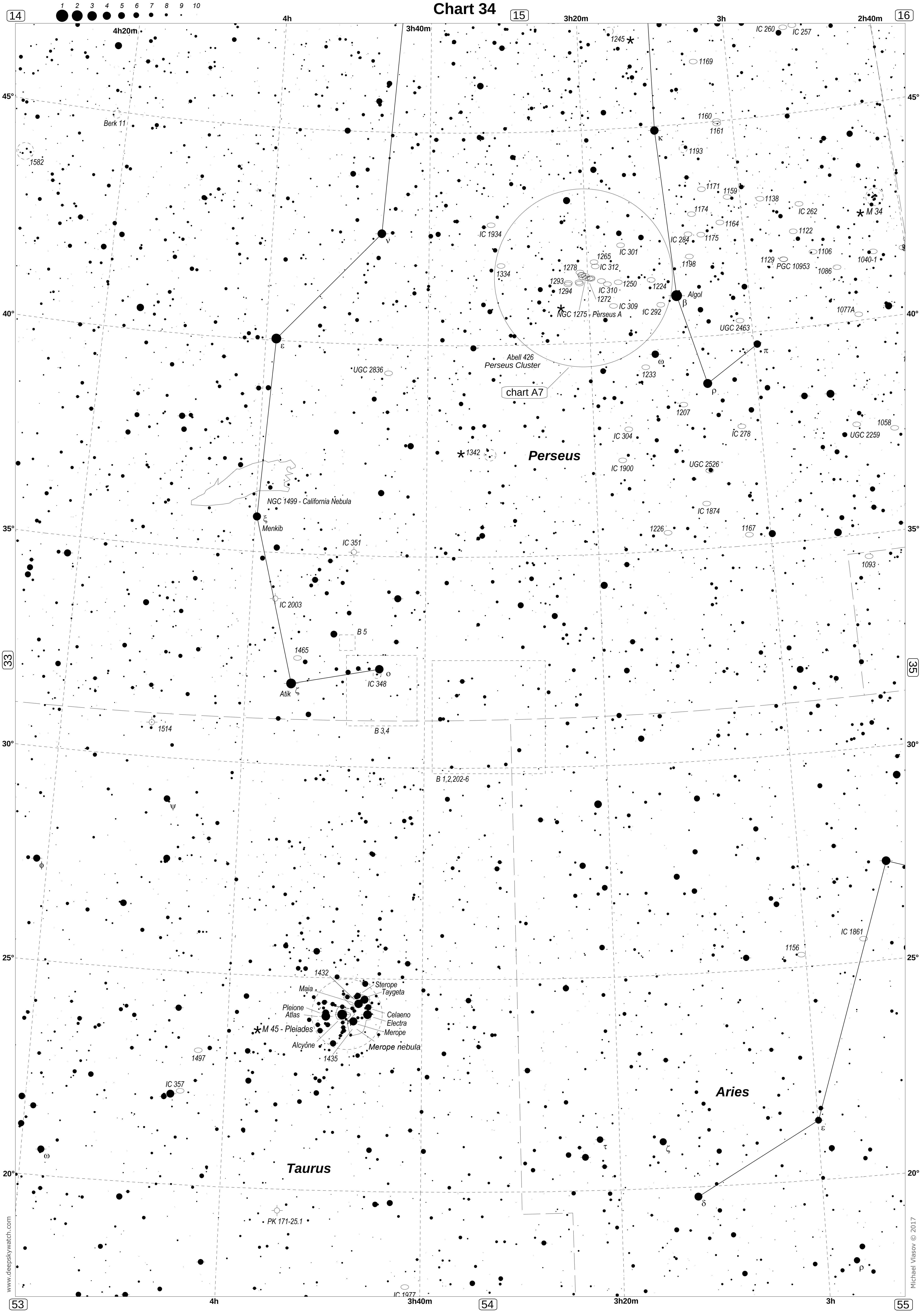
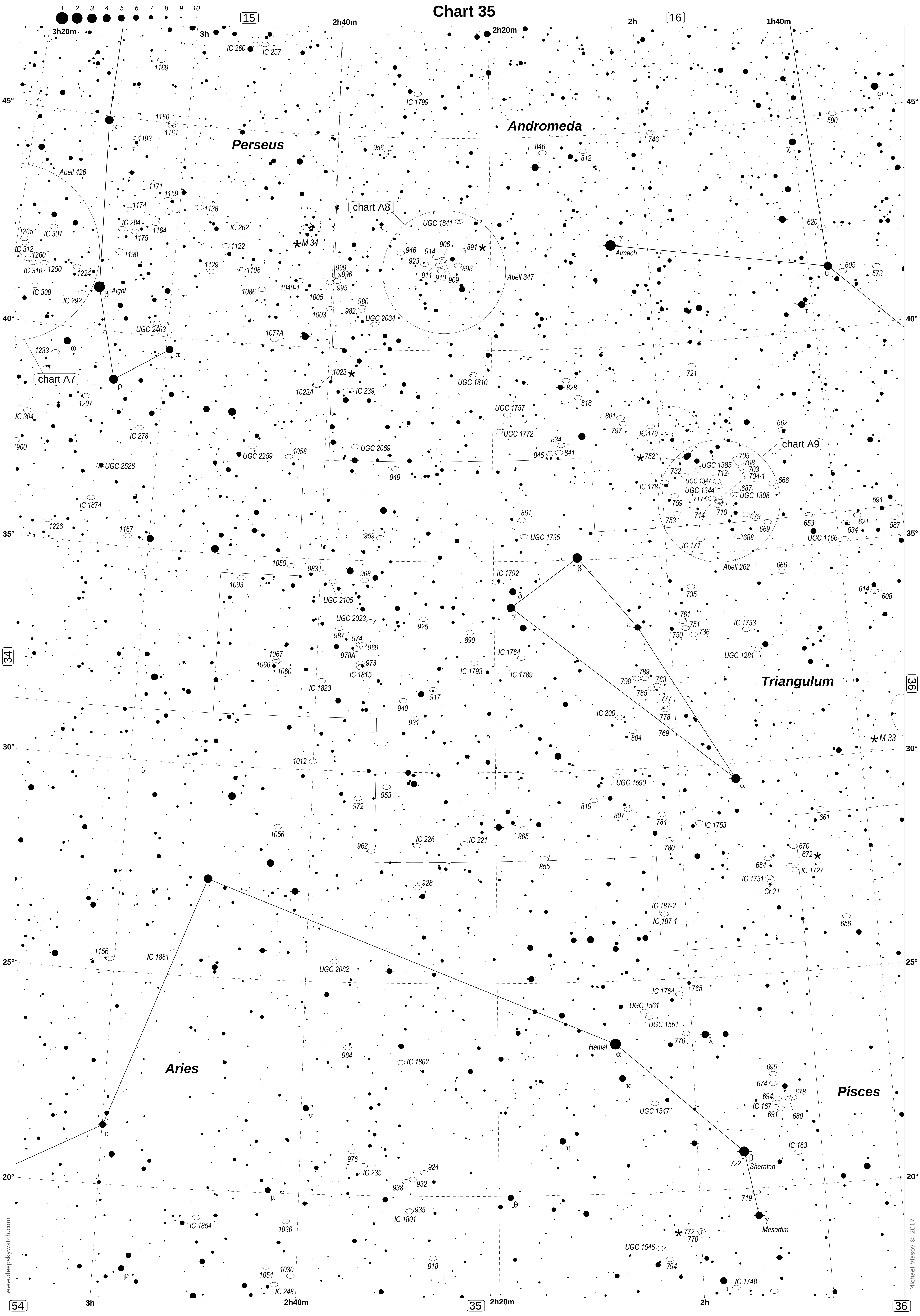

1 2 3 4 5 6 7 8 9 10
5h40m
5h20m
14
5h
4h40m
4h20m
4h
15
1883
Capella
Berk 18
45°
1605
Berk 11
Ru 148
1664
1582
Berk 68
Cr 62
40°
1857
PK 169-0.1
1778
Perseus
M 38
NGC 1499 - California Nebula
Menkib
1907
Auriga
IC 2067
35°
1579
Northern Trifid
1931
IC 417
IC 405 - Flaming Star Nebula
M 36
1893
Hassaleh
32
34
B 29
Pal 2
Berk 17
PK 173-5.1
1514
IC 419
B 26-8
30°
Berk 19
Elnath
IC 2088
Taurus
IC 2087
PK 174-14.1
25°
1750
IC 357
NGC 1555 - Hind's Variable Nebula
1615
20°
Be 84
1647
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52
5h20m
5h
53
4h40m
4h20m
54

Chart 34



14
15
16
33
35
53
54
55
1 2 3 4 5 6 7 8 9 10
4h20m
4h
3h40m
3h20m
3h
2h40m
45°
40°
35°
30°
25°
20°
Berk 11
1582
1245
1169
1160
1161
1193
IC 260
IC 257
1171
1159
1138
1174
IC 262
M 34
1164
1122
IC 284
1175
1106
IC 1934
IC 301
1265
IC 312
1198
1129
PGC 10953
1086
1040-1
1334
1278
1293
1294
1250
1224
IC 310
1272
IC 309
Algol
NGC 1275 - Perseus A
IC 292
1077A
UGC 2463
Abell 426
Perseus Cluster
chart A7
1233
UGC 2836
1207
IC 278
1058
UGC 2259
IC 304
1342
Perseus
IC 1900
UGC 2526
NGC 1499 - California Nebula
Menkib
IC 1874
1226
1167
1093
IC 351
IC 2003
B 5
1465
IC 348
Atik
B 3,4
1514
B 1,2,202-6
1432
Sterope
Taygeta
Maia
Pleione
Atlas
Celaeno
Electra
Merope
M 45 - Pleiades
Alcyone
1435
Merope nebula
1497
IC 357
IC 1861
1156
Aries
Taurus
PK 171-25.1
IC 1977
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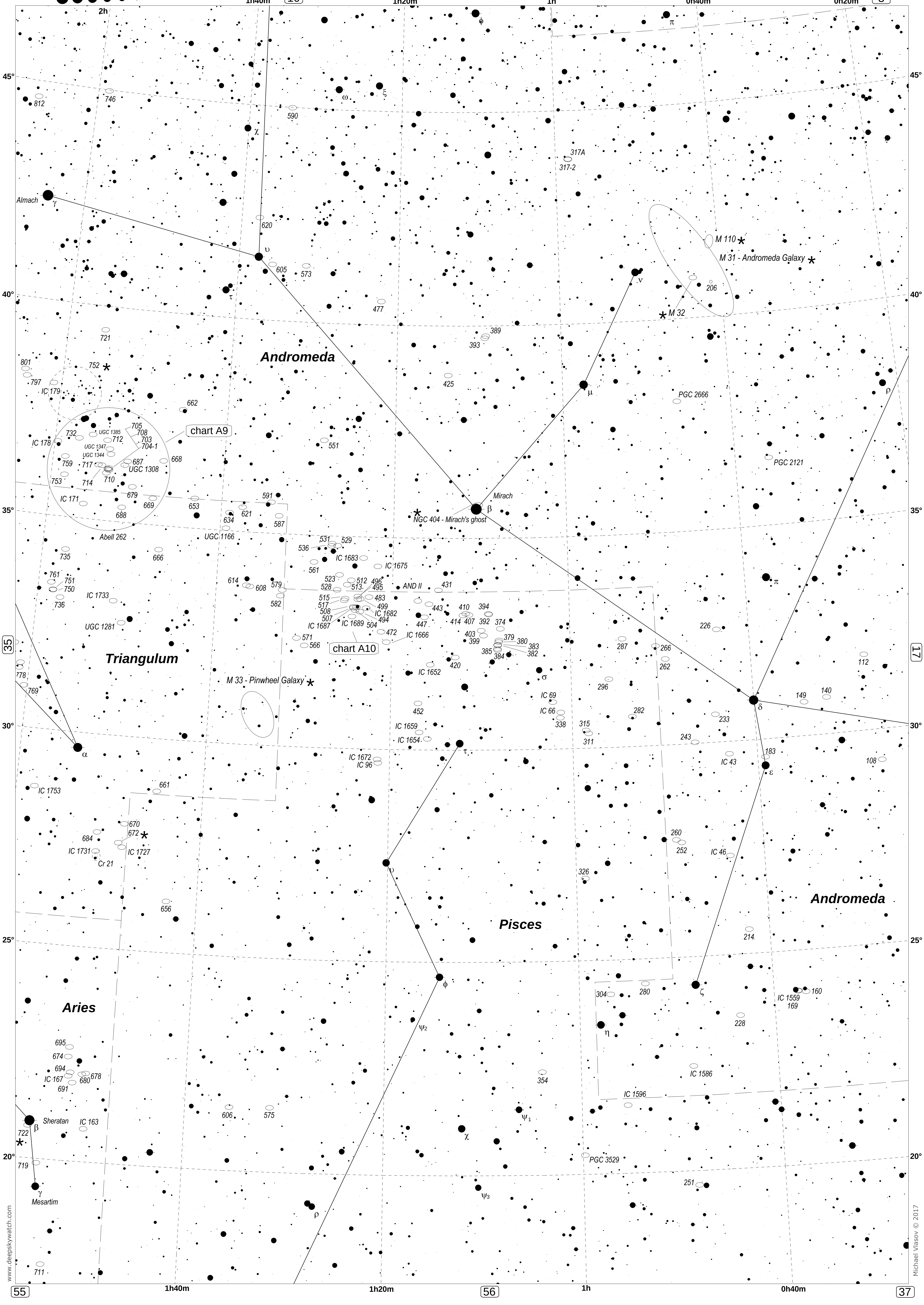
Chart 35



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Chart 36



1 2 3 4 5 6 7 8 9 10
2h
1h40m
16
1h20m
1h
0h40m
0h20m
3
45°
40°
35°
30°
25°
20°
35
17
55
56
37
Almach
Mirach
Sheratan
Mesartim
Andromeda
Triangulum
Pisces
Aries
M 110
M 31 - Andromeda Galaxy
M 32
NGC 404 - Mirach's ghost
M 33 - Pinwheel Galaxy
AND II
chart A9
chart A10
Abell 262
UGC 1166
UGC 1281
UGC 1308
UGC 1385
UGC 1347
UGC 1344
PGC 2666
PGC 2121
PGC 3529
IC 179
IC 178
IC 171
IC 1733
IC 1753
IC 1731
IC 1727
Cr 21
IC 167
IC 163
IC 1683
IC 1675
IC 1687
IC 1689
IC 1682
IC 1666
IC 1652
IC 1659
IC 1654
IC 1672
IC 96
IC 69
IC 66
IC 43
IC 46
IC 1559
IC 1586
IC 1596
317A
317-2
812
746
590
620
605
573
477
389
393
425
206
721
801
797
752
662
551
668
591
653
634
621
587
735
666
761
751
750
736
614
608
579
582
571
566
536
531
529
561
523
528
512
513
496
495
483
515
517
508
507
499
494
504
472
431
443
410
394
447
414
407
392
374
403
399
379
380
383
385
384
382
420
452
287
266
262
226
296
282
315
311
338
112
149
140
233
243
183
108
778
769
661
670
672
684
656
260
252
326
214
304
280
160
169
228
695
674
694
678
680
691
354
606
575
722
719
251
711
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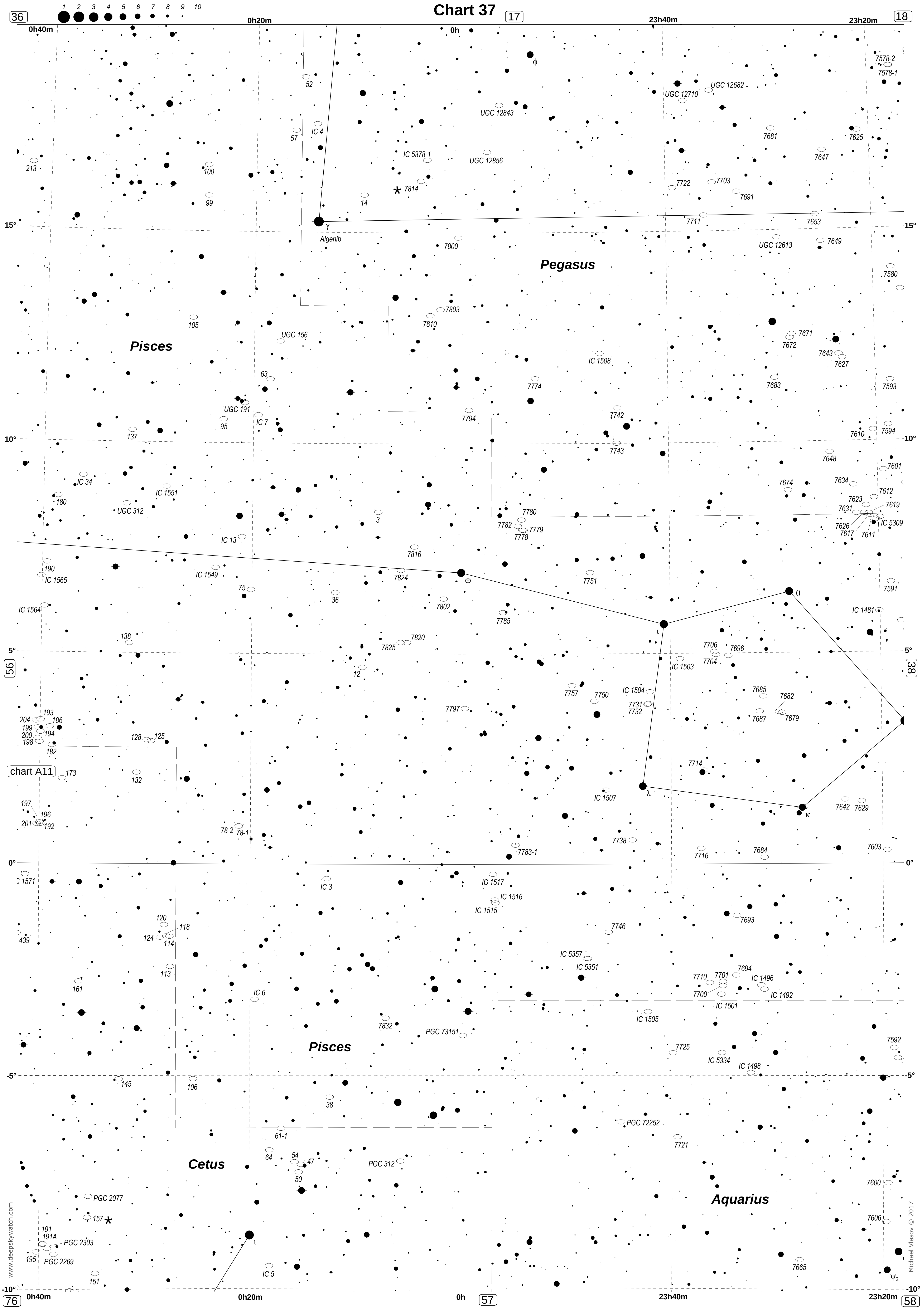

1 2 3 4 5 6 7 8 9 10
36
17
18
56
38
76
57
58
chart A11
0h40m
0h20m
0h
23h40m
23h20m
15°
10°
5°
0°
-5°
-10°
Pegasus
Pisces
Cetus
Aquarius
Algenib
γ
φ
ω
ι
θ
λ
κ
ψ3
UGC 12682
UGC 12710
UGC 12843
UGC 12856
UGC 12613
UGC 156
UGC 191
UGC 312
IC 4
IC 5378-1
IC 7
IC 34
IC 1551
IC 13
IC 1549
IC 1565
IC 1564
IC 1508
IC 1481
IC 1503
IC 1504
IC 1507
IC 5309
IC 1571
IC 3
IC 1517
IC 1516
IC 1515
IC 5357
IC 5351
IC 1496
IC 1492
IC 1501
IC 1505
IC 6
IC 5334
IC 1498
IC 5
PGC 73151
PGC 72252
PGC 312
PGC 2077
PGC 2303
PGC 2269
7578-2
7578-1
7681
7625
7647
7722
7703
7691
7711
7653
7649
7580
7800
7814
7803
7810
7671
7672
7643
7627
7683
7593
7774
7742
7743
7794
7610
7594
7648
7601
7634
7674
7612
7623
7619
7631
7626
7617
7611
7780
7782
7779
7778
7816
7824
7751
7591
7802
7785
7825
7820
7706
7696
7704
7757
7750
7731
7732
7685
7682
7687
7679
7797
7714
7642
7629
7738
7783-1
7716
7684
7603
7693
7746
7710
7701
7694
7700
7832
7725
7592
7721
7600
7606
7665
52
57
14
100
99
213
105
63
95
137
180
3
190
75
36
138
12
193
186
204
199
194
200
198
182
128
125
173
132
197
196
201
192
78-2
78-1
120
118
124
114
113
161
145
106
38
61-1
64
54
47
50
157
191
191A
195
151
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Chart 38

17 18 19 37 39 57 58 59

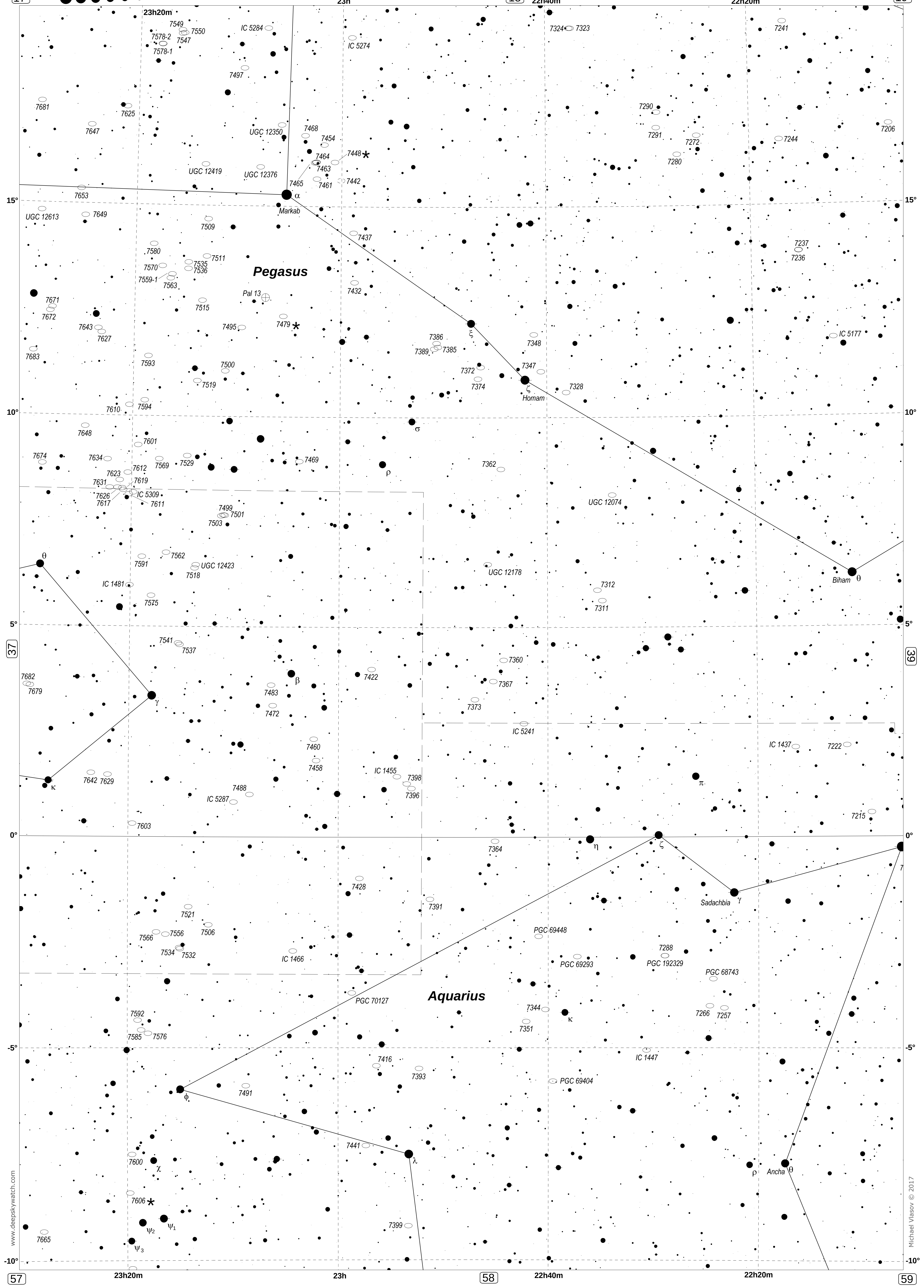
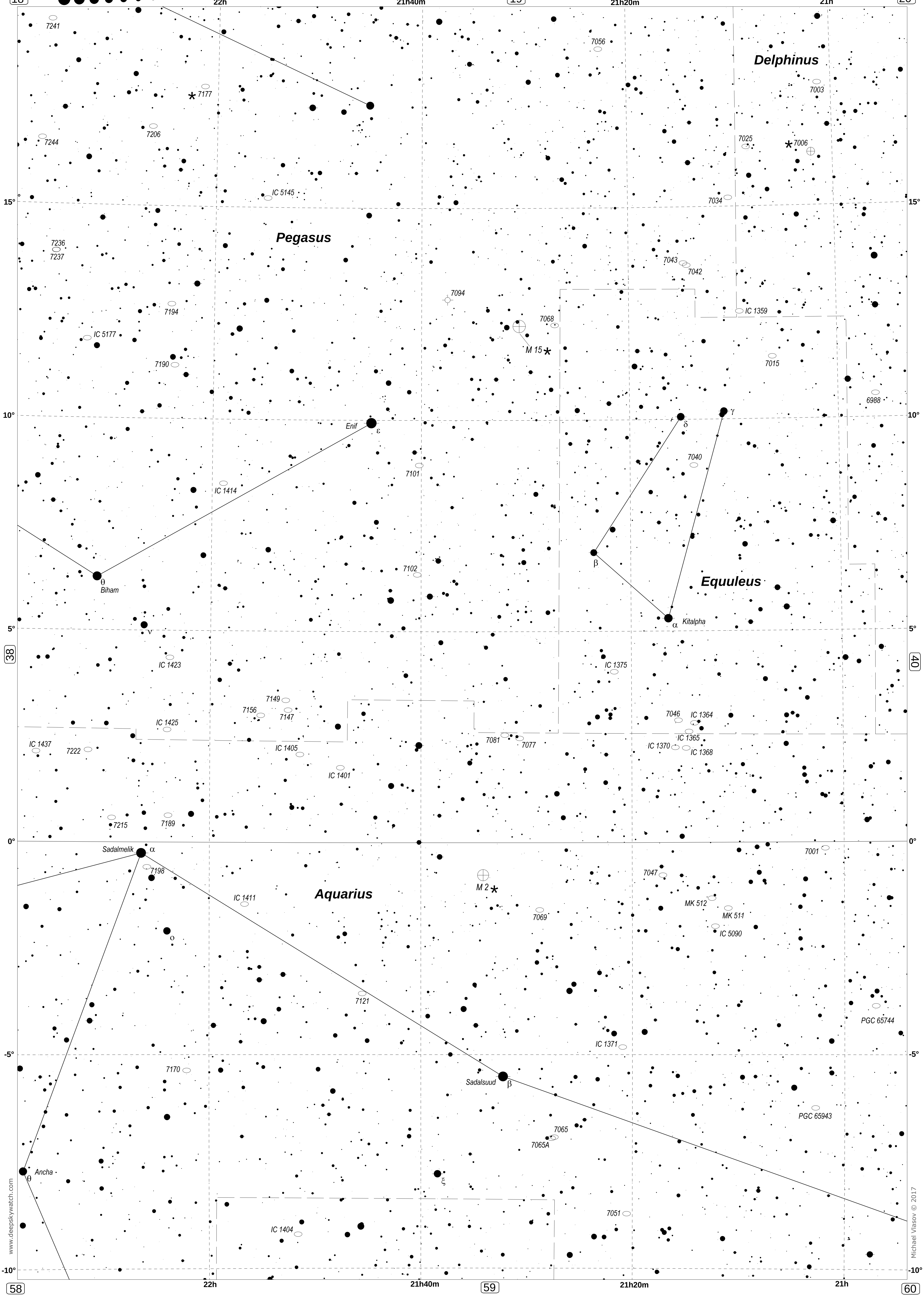


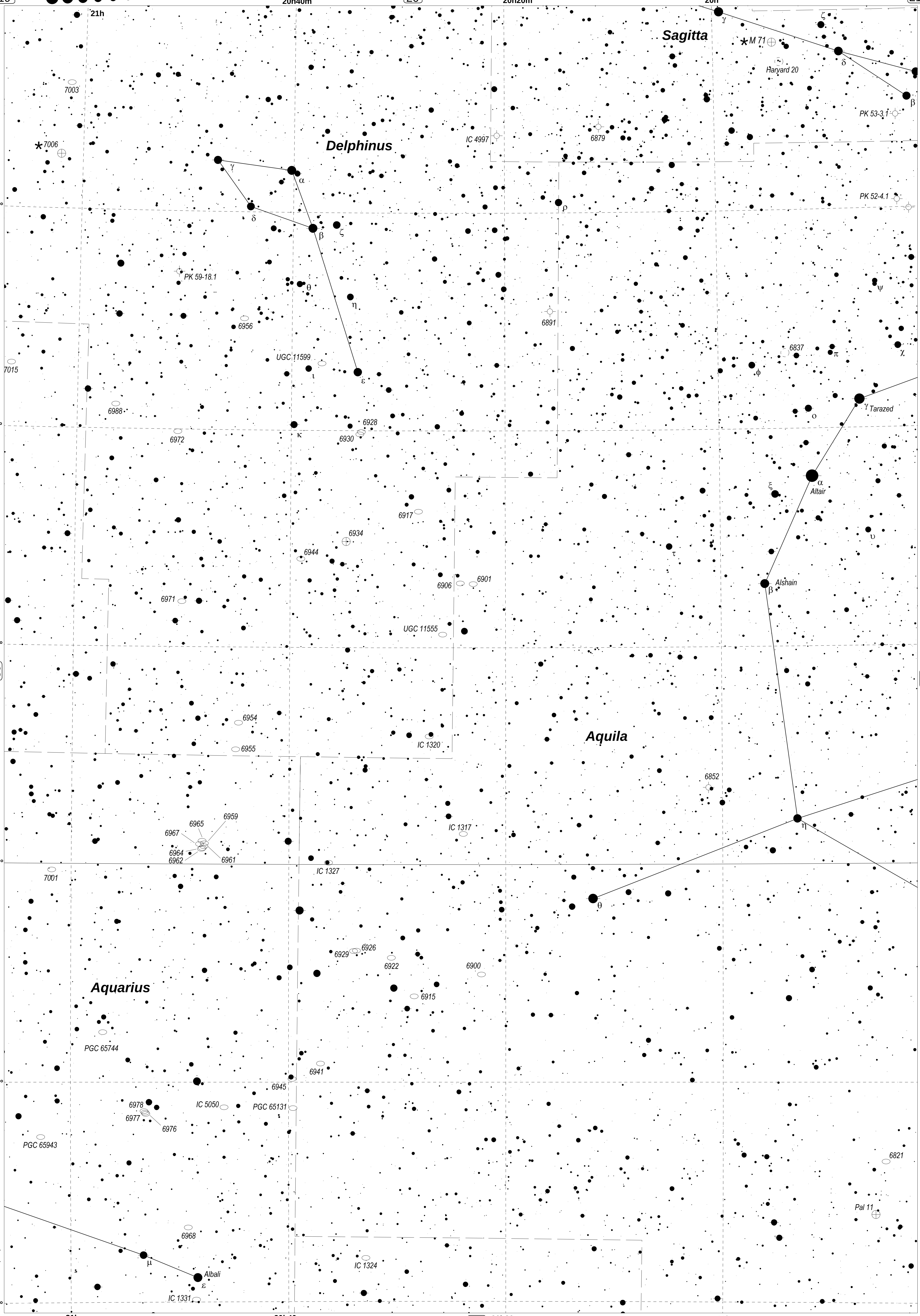
Chart 39



1 2 3 4 5 6 7 8 9 10
18
19
20
38
40
58
59
60
22h
21h40m
21h20m
21h
15°
10°
5°
0°
-5°
-10°
Delphinus
Pegasus
Equuleus
Aquarius
7241
7177
7206
7244
7056
7003
7025
7006
IC 5145
7034
7236
7237
7043
7042
7094
7194
IC 1359
7068
IC 5177
M 15
7015
7190
6988
Enif
ε
δ
γ
7040
7101
IC 1414
θ
Biham
7102
β
α
Kitalpha
ν
IC 1423
IC 1375
7149
7156
7147
IC 1425
7046
IC 1364
7081
7077
IC 1365
IC 1437
7222
IC 1405
IC 1370
IC 1368
IC 1401
7215
7189
Sadalmelik
7198
7001
7047
M 2
IC 1411
MK 512
MK 511
7069
IC 5090
o
7121
PGC 65744
IC 1371
7170
Sadalsuud
PGC 65943
7065
7065A
Ancha
ξ
7051
IC 1404
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Chart 40

19 20 21

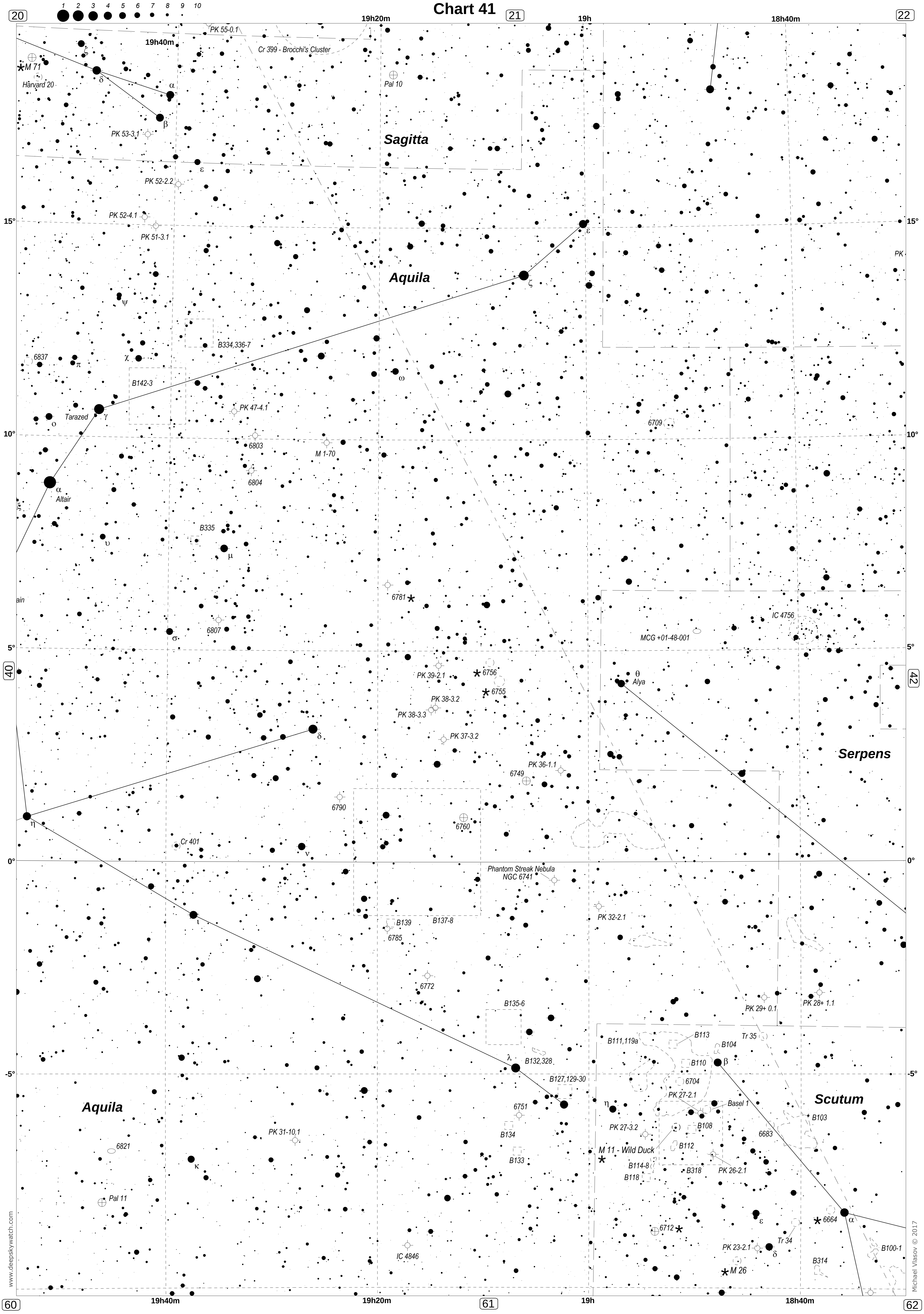


39 41

59 60 61

Chart 41

20 21 22



40 42

60 61 62

Chart 42

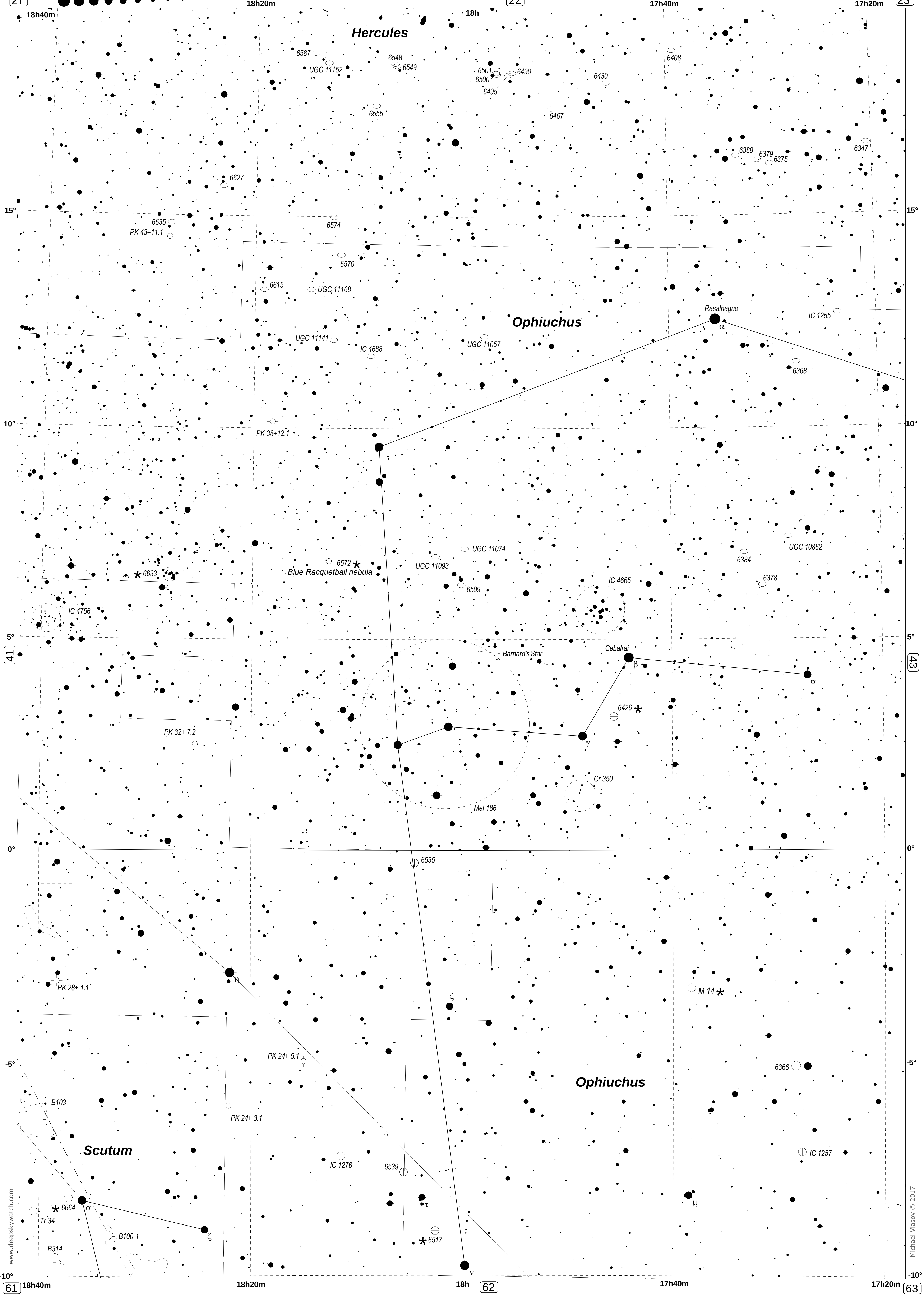
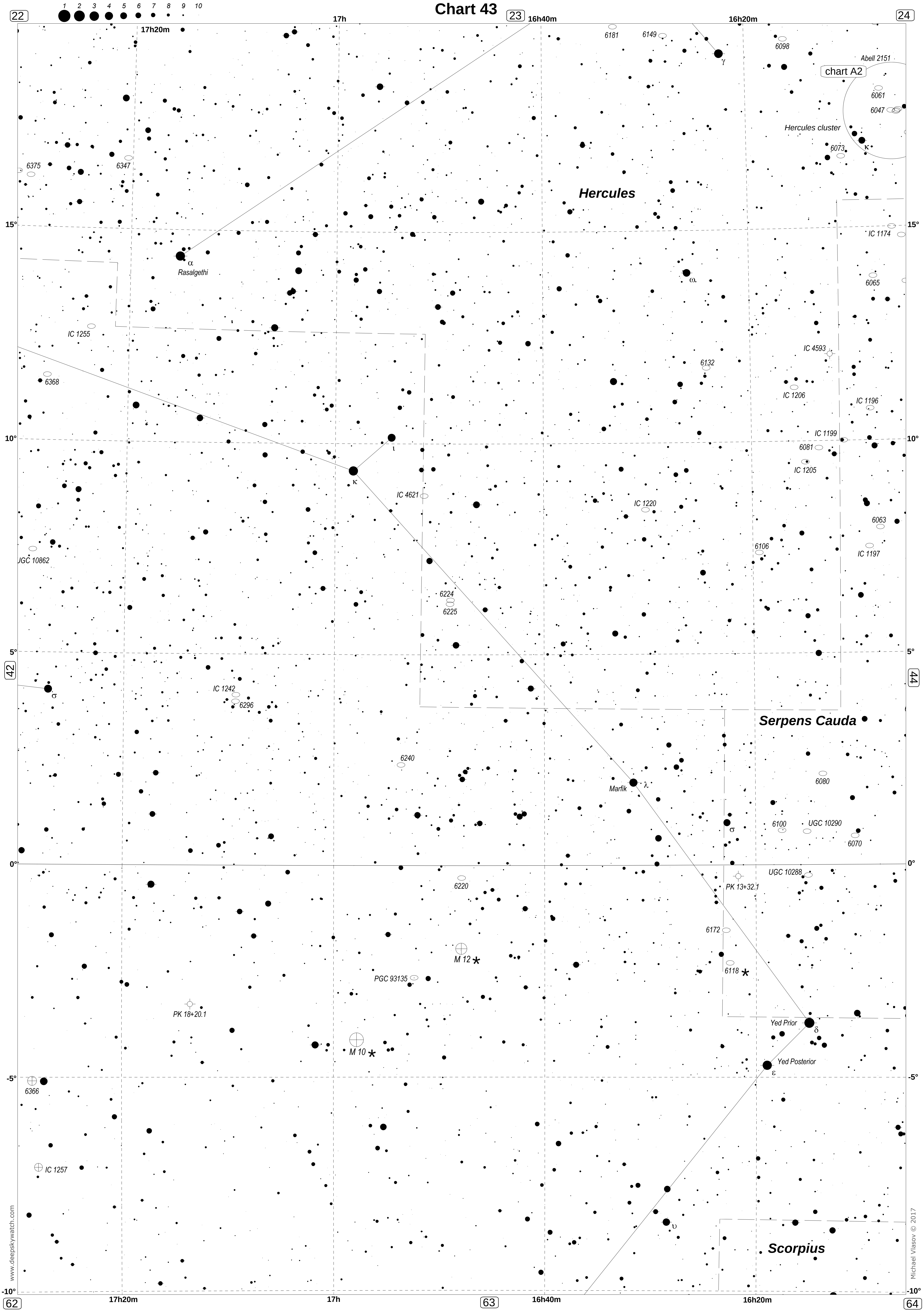

1 2 3 4 5 6 7 8 9 10
21
22
23
41
43
61
62
63
18h40m
18h20m
18h
17h40m
17h20m
15°
10°
5°
0°
-5°
-10°
Hercules
Ophiuchus
Ophiuchus
Scutum
6587
UGC 11152
6548
6549
6501
6500
6495
6490
6430
6408
6555
6467
6389
6379
6375
6347
6627
6635
PK 43+11.1
6574
6570
6615
UGC 11168
UGC 11141
IC 4688
UGC 11057
Rasalhague
α
IC 1255
6368
PK 38+12.1
UGC 11074
UGC 11093
6572
Blue Racquetball nebula
6633
IC 4756
6509
IC 4665
6384
UGC 10862
6378
Barnard's Star
Cebalrai
β
σ
6426
γ
PK 32+ 7.2
Cr 350
Mel 186
6535
η
PK 28+ 1.1
ζ
M 14
PK 24+ 5.1
6366
B103
PK 24+ 3.1
IC 1276
6539
IC 1257
τ
μ
6664
α
Tr 34
B100-1
ζ
6517
B314
ν
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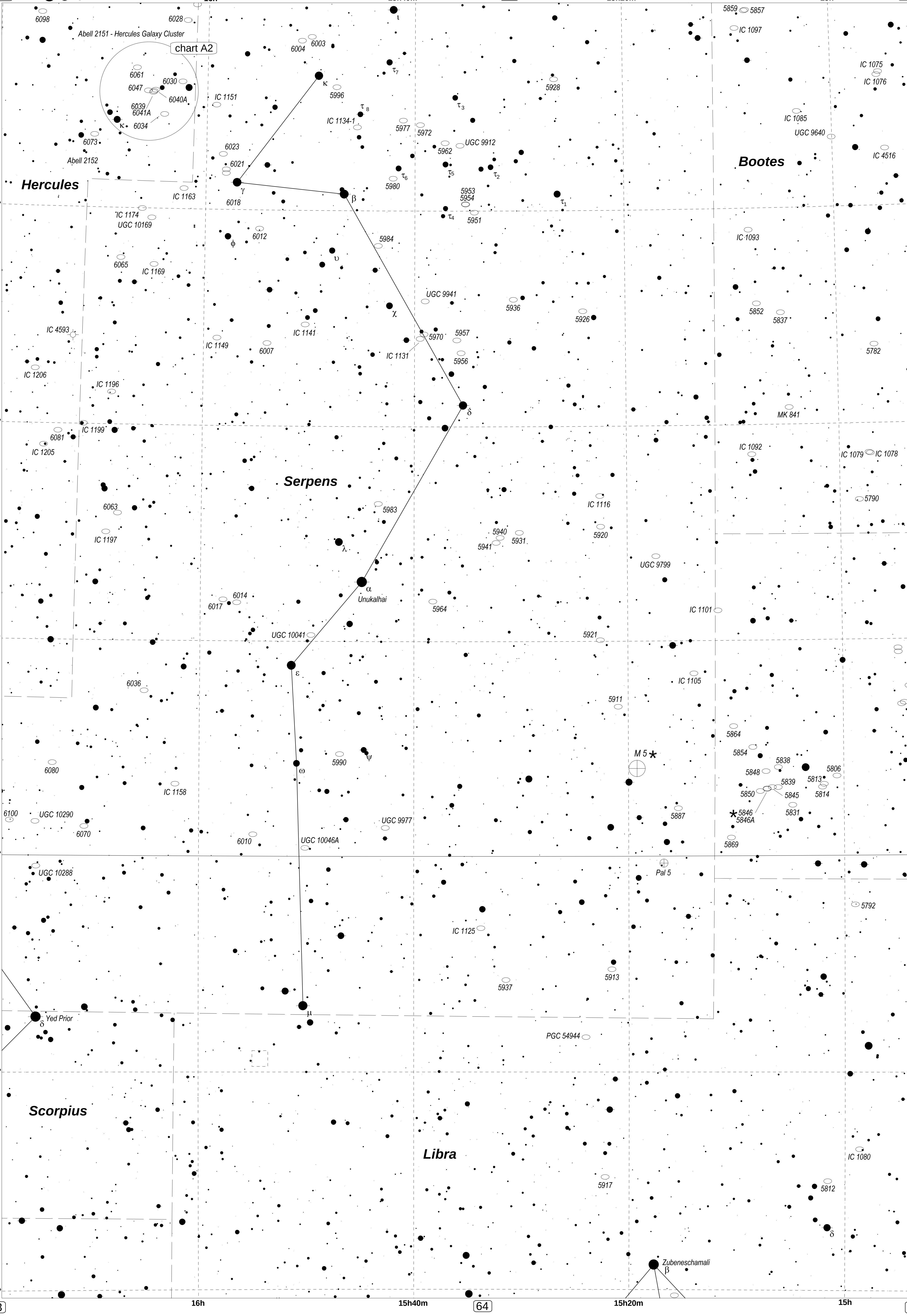
Chart 43



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Chart 44

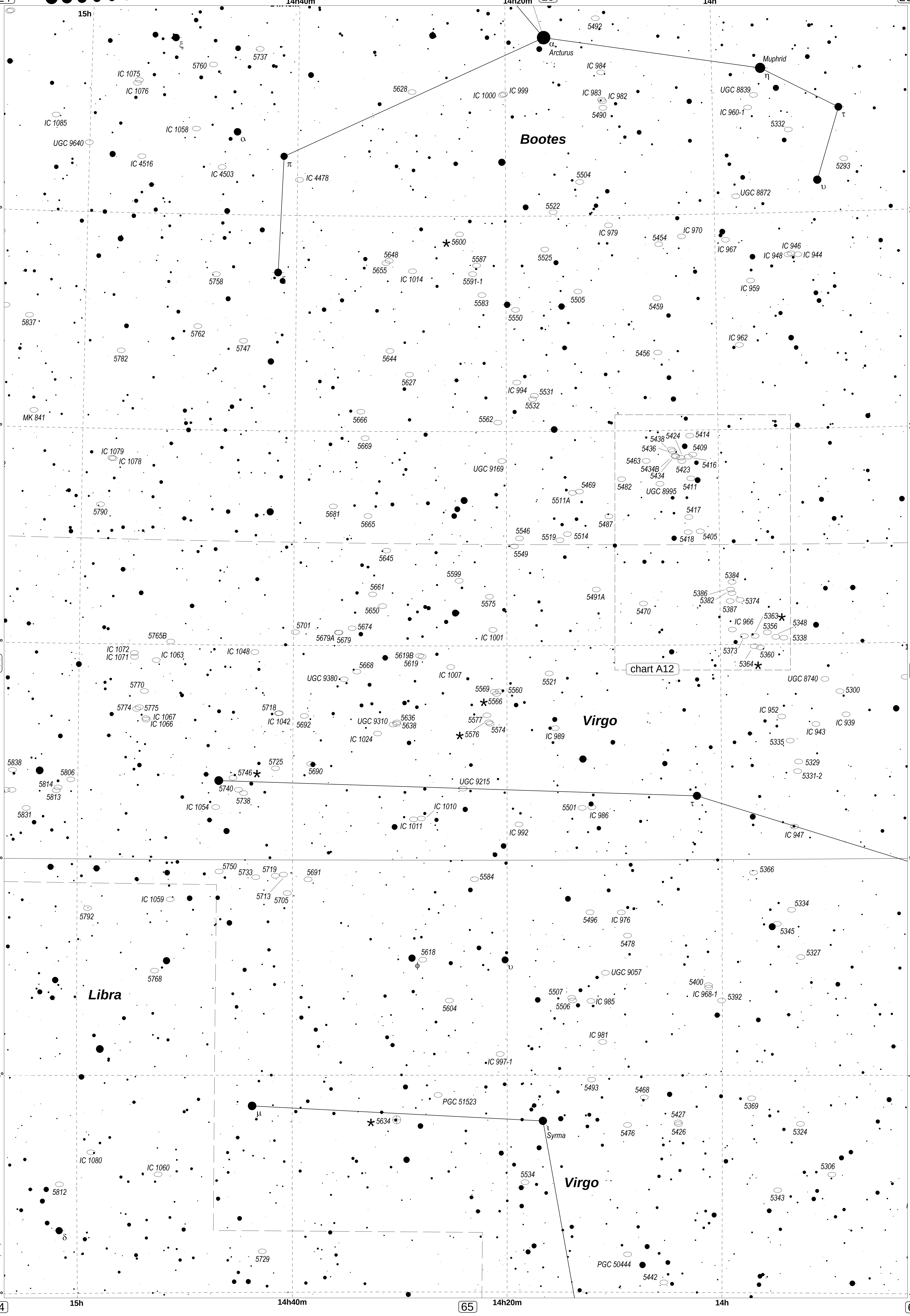
23 24 25 43 45 63 64 65



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Chart 45

24 25 26



44 46

64 65 66

Chart 46

25 26 27 45 47 65 66 67

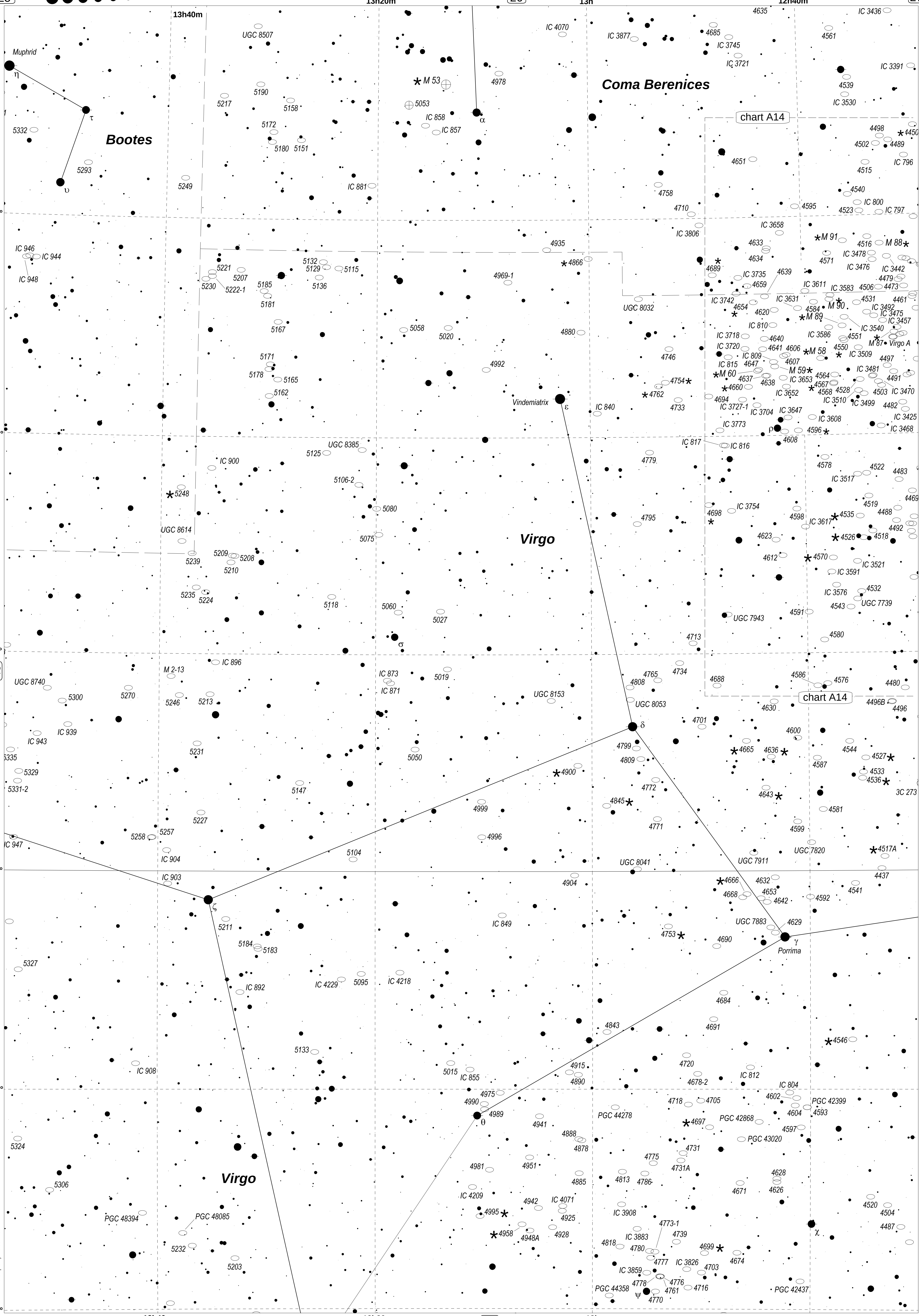
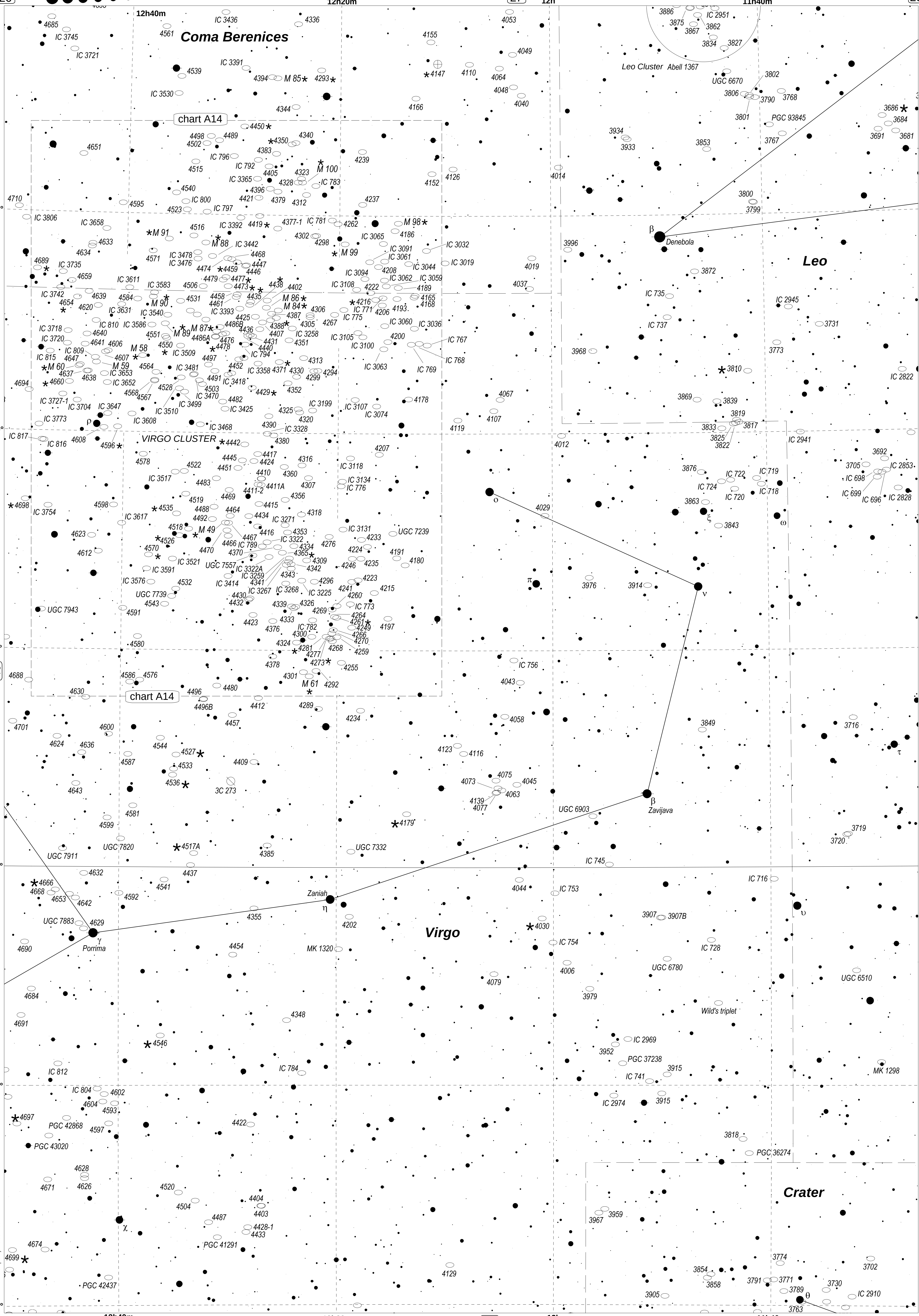


Chart 47

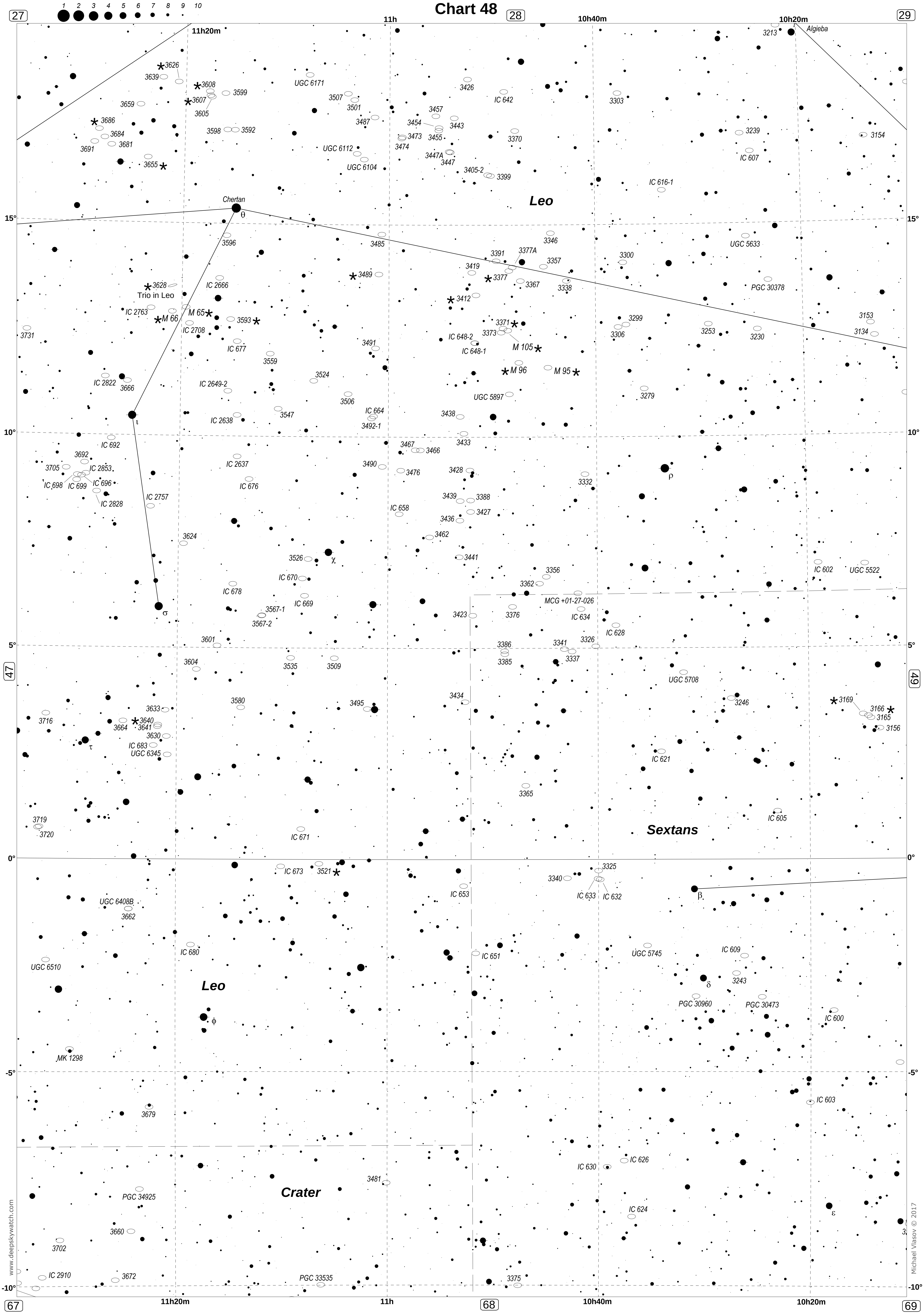
26 27 28 46 48 66 67 68

1 2 3 4 5 6 7 8 9 10



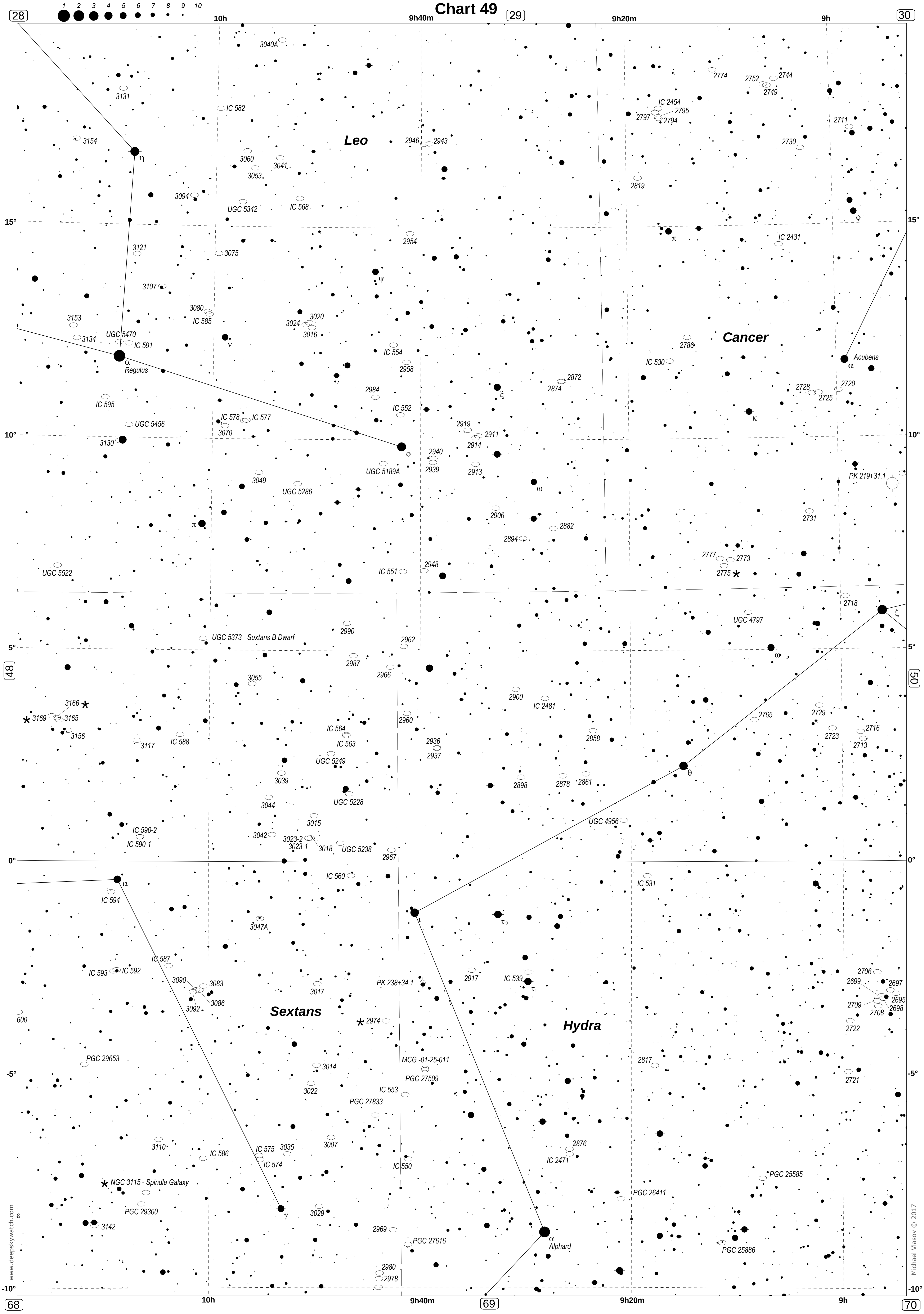
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Chart 48



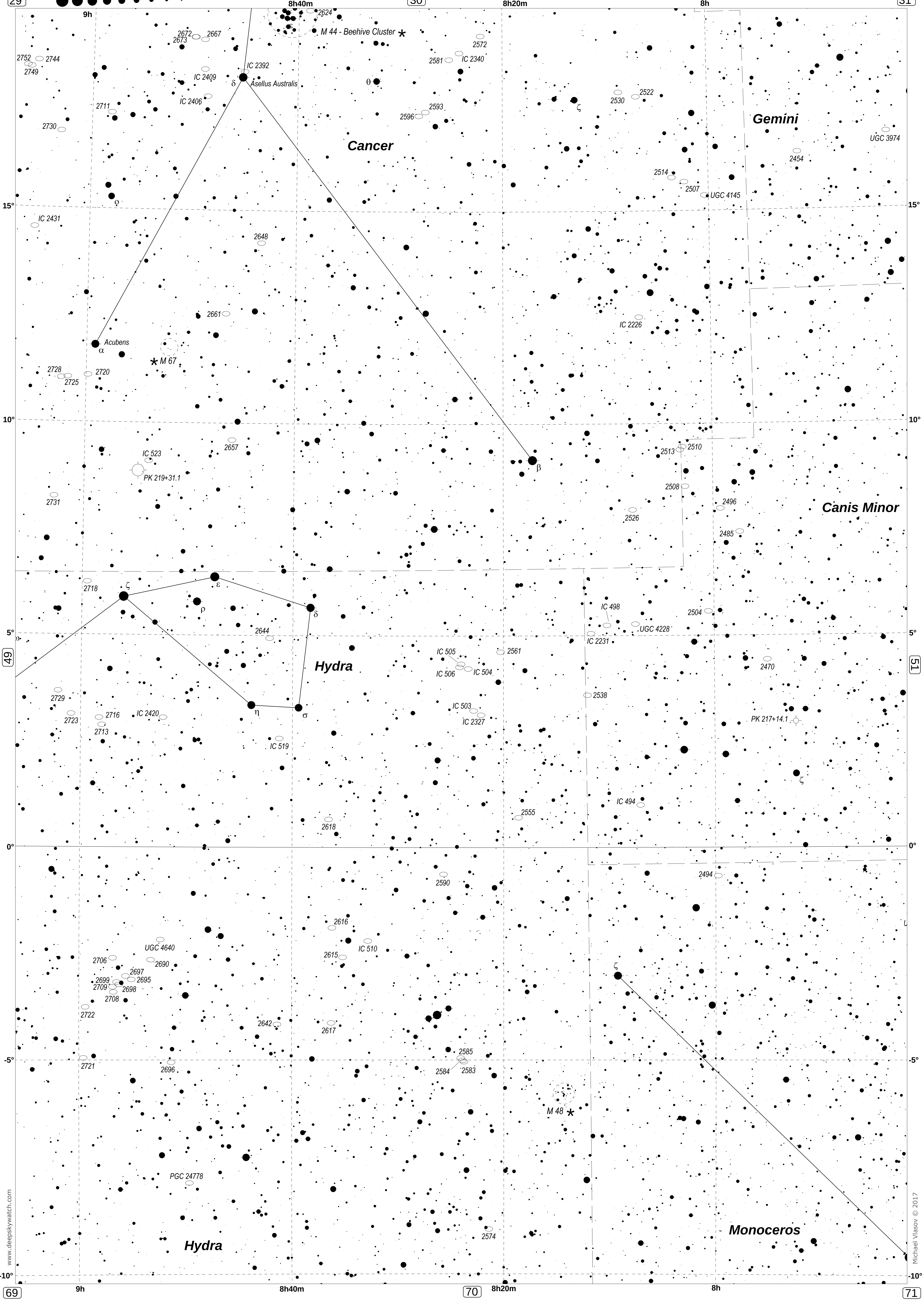
1 2 3 4 5 6 7 8 9 10
27
28
29
47
49
67
68
69
11h20m
11h
10h40m
10h20m
15°
10°
5°
0°
-5°
-10°
Leo
Sextans
Crater
Algieba
Chertan
Trio in Leo
M 65
M 66
M 95
M 96
M 105
θ
ι
σ
χ
ρ
τ
β
δ
φ
ε
3626
3639
3608
3599
3607
3605
3659
3686
3684
3681
3691
3598
3592
3655
UGC 6171
3507
3501
3487
3426
IC 642
3303
3213
3457
3454
3443
3455
3473
3474
UGC 6112
UGC 6104
3447A
3447
3405-2
3399
3370
3239
IC 607
3154
IC 616-1
3596
3485
3346
UGC 5633
3391
3377A
3357
3300
3419
3377
3367
3338
3489
3628
IC 2666
3412
PGC 30378
IC 2763
3593
2708
IC 677
3371
3373
IC 648-2
IC 648-1
3491
3559
3299
3306
3253
3230
3153
3134
3731
IC 2822
3666
IC 2649-2
3524
3506
3279
UGC 5897
IC 664
3492-1
3547
IC 2638
3438
IC 692
3467
3466
3433
3692
3705
IC 2853
IC 698
IC 699
IC 696
IC 2828
IC 2637
3490
3476
3428
IC 676
3332
3439
3388
3427
IC 2757
IC 658
3436
3462
3624
3526
3441
IC 602
UGC 5522
3356
IC 670
3362
IC 678
MCG +01-27-026
IC 669
3567-1
3567-2
3423
3376
IC 634
IC 628
3601
3386
3385
3341
3337
3326
3604
3535
3509
UGC 5708
3580
3495
3434
3246
3169
3166
3165
3156
3716
3633
3640
3664
3641
3630
IC 683
UGC 6345
IC 621
3365
3719
3720
IC 671
IC 605
IC 673
3521
3340
3325
IC 633
IC 632
UGC 6408B
3662
IC 653
IC 680
IC 651
UGC 5745
IC 609
UGC 6510
3243
PGC 30960
PGC 30473
IC 600
MK 1298
IC 603
3679
IC 630
IC 626
3481
PGC 34925
IC 624
3660
3702
IC 2910
3672
PGC 33535
3375
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Chart 49



1 2 3 4 5 6 7 8 9 10
28
29
30
10h
9h40m
9h20m
9h
Leo
Cancer
Sextans
Hydra
3040A
3131
IC 582
3154
3060
3041
3053
2946
2943
Regulus
UGC 5470
IC 591
3153
3134
3094
UGC 5342
IC 568
3121
3075
2954
3107
3080
IC 585
3024
3020
3016
IC 554
2958
2984
IC 552
IC 595
UGC 5456
IC 578
IC 577
3070
3130
2919
2911
2914
2940
2939
2913
UGC 5189A
3049
UGC 5286
2906
2882
2894
UGC 5522
IC 551
2948
2872
2874
2774
2752
2744
2749
IC 2454
2795
2797
2794
2711
2730
2819
IC 2431
2786
IC 530
Acubens
2728
2725
2720
PK 219+31.1
2731
2777
2773
2775
2718
UGC 4797
UGC 5373 - Sextans B Dwarf
2990
2962
2987
2966
3055
2900
IC 2481
3166
3169
3165
3156
3117
IC 588
IC 564
IC 563
2960
2936
2937
2858
2765
2729
2723
2716
2713
UGC 5249
3039
UGC 5228
2898
2878
2861
3044
3015
IC 590-2
IC 590-1
3042
3023-2
3023-1
3018
UGC 5238
2967
UGC 4956
IC 560
IC 531
IC 594
3047A
IC 587
IC 593
IC 592
3090
3083
3092
3086
3017
2917
IC 539
PK 238+34.1
2706
2699
2697
2695
2709
2708
2698
600
2974
2722
PGC 29653
3014
MCG -01-25-011
PGC 27509
2817
2721
3022
IC 553
PGC 27833
3110
3007
IC 575
3035
IC 574
IC 586
IC 550
2876
IC 2471
PGC 25585
NGC 3115 - Spindle Galaxy
PGC 29300
PGC 26411
3142
3029
2969
PGC 27616
Alphard
PGC 25886
2980
2978
15°
10°
5°
0°
-5°
-10°
48
50
68
69
70
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Chart 50



1 2 3 4 5 6 7 8 9 10
29
30
31
49
51
69
70
71
9h
8h40m
8h20m
8h
15°
10°
5°
0°
-5°
-10°
Cancer
Gemini
Canis Minor
Hydra
Monoceros
M 44 - Beehive Cluster
M 67
M 48
Asellus Australis
Acubens
2624
2672
2667
2673
2752
2744
2749
IC 2392
IC 2409
IC 2406
2711
2730
2572
2581
IC 2340
2530
2522
2593
2596
UGC 3974
2454
2514
2507
UGC 4145
IC 2431
2648
2661
IC 2226
2728
2720
2725
IC 523
PK 219+31.1
2657
2513
2510
2508
2731
2496
2526
2485
2718
IC 498
2504
UGC 4228
IC 2231
2644
IC 505
2561
IC 506
IC 504
2470
2729
2538
2723
2716
IC 2420
2713
IC 503
IC 2327
PK 217+14.1
IC 519
IC 494
2555
2618
2494
2590
2616
UGC 4640
2706
2690
IC 510
2615
2697
2699
2695
2709
2698
2708
2722
2642
2617
2585
2721
2696
2584
2583
PGC 24778
2574
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Chart 51

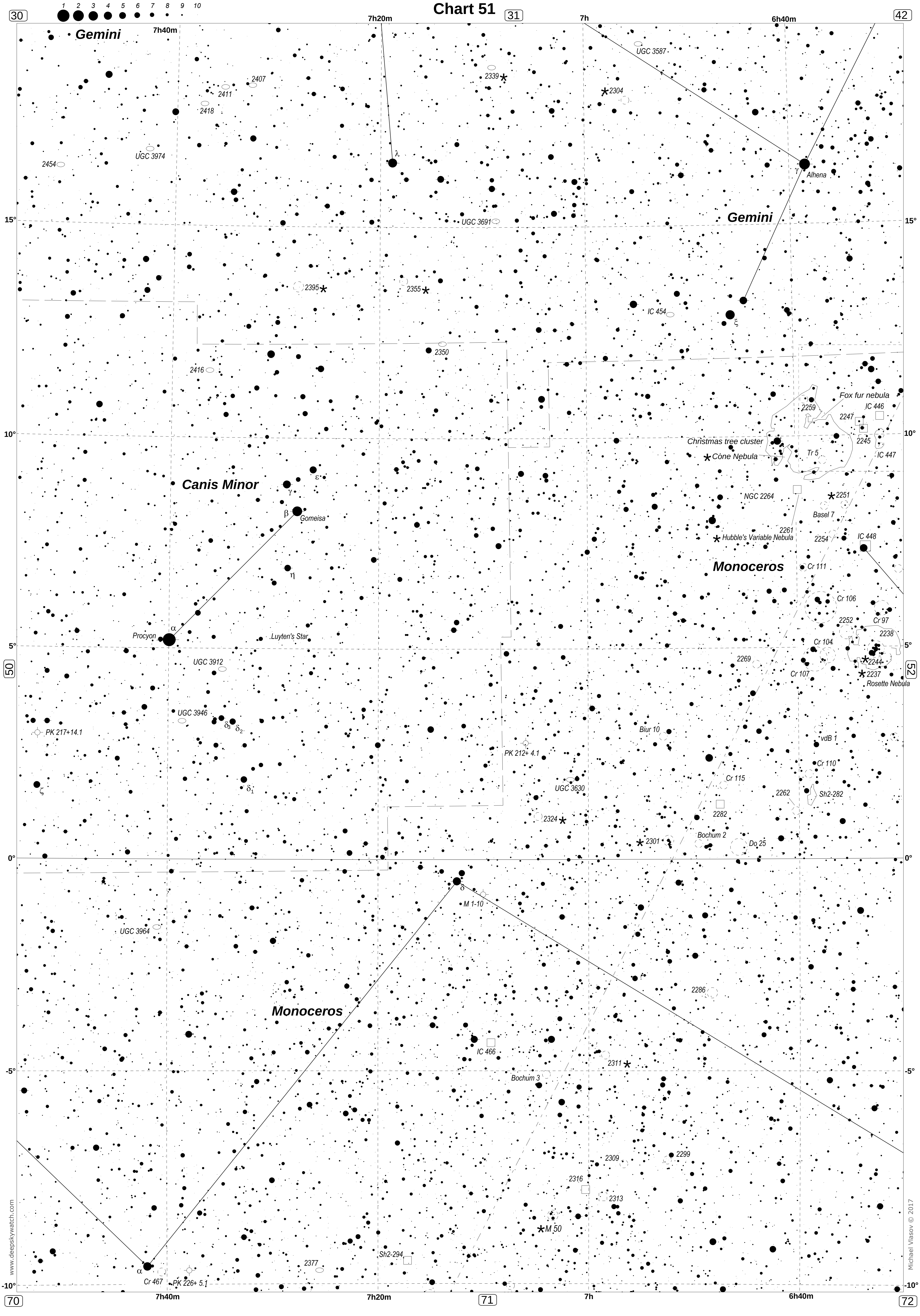
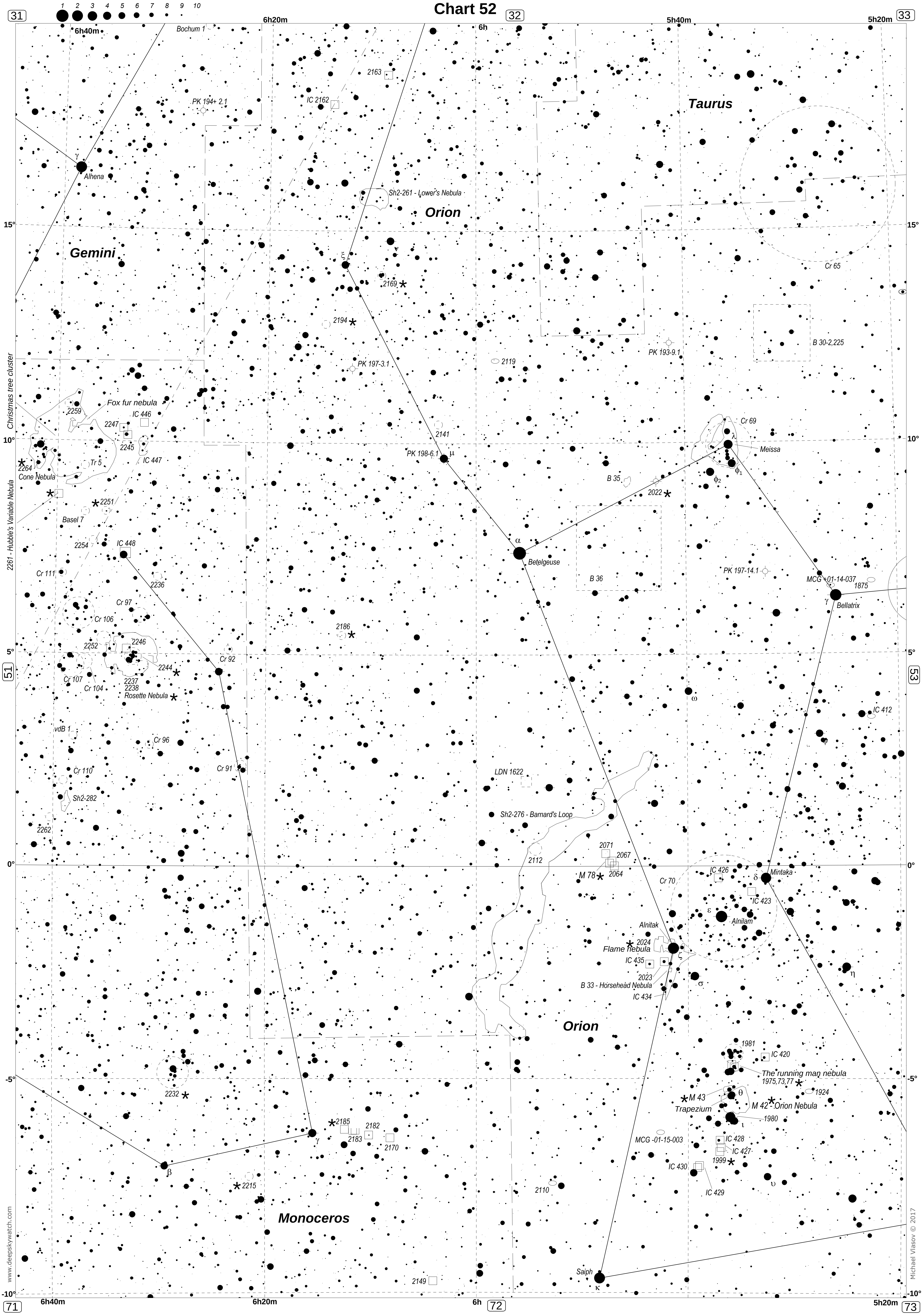

30
31
42
1 2 3 4 5 6 7 8 9 10
7h40m
7h20m
7h
6h40m
Gemini
2407
2411
2418
UGC 3974
2454
λ
UGC 3587
2339
2304
γ
Alhena
Gemini
15°
UGC 3691
2395
2355
IC 454
ξ
2350
2416
Fox fur nebula
2259
IC 446
2247
2245
10°
Christmas tree cluster
Cone Nebula
Tr 5
IC 447
ε
Canis Minor
γ
NGC 2264
2251
β
Gomeisa
Basel 7
2261
Hubble's Variable Nebula
2254
IC 448
η
Monoceros
Cr 111
Cr 106
2252
Cr 97
α
Procyon
Luyten's Star
2238
5°
Cr 104
UGC 3912
2269
2244
Cr 107
2237
Rosette Nebula
50
52
UGC 3946
δ_3
δ_2
PK 217+14.1
PK 212+ 4.1
Biur 10
vdB 1
Cr 110
Cr 115
ζ
δ_1
UGC 3630
2262
Sh2-282
2282
2324
Bochum 2
2301
Do 25
0°
δ
M 1-10
UGC 3964
2286
Monoceros
IC 466
2311
-5°
Bochum 3
2309
2299
2316
2313
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M 50
Sh2-294
2377
α
Cr 467
PK 226+ 5.1
-10°
70
71
72

Chart 52



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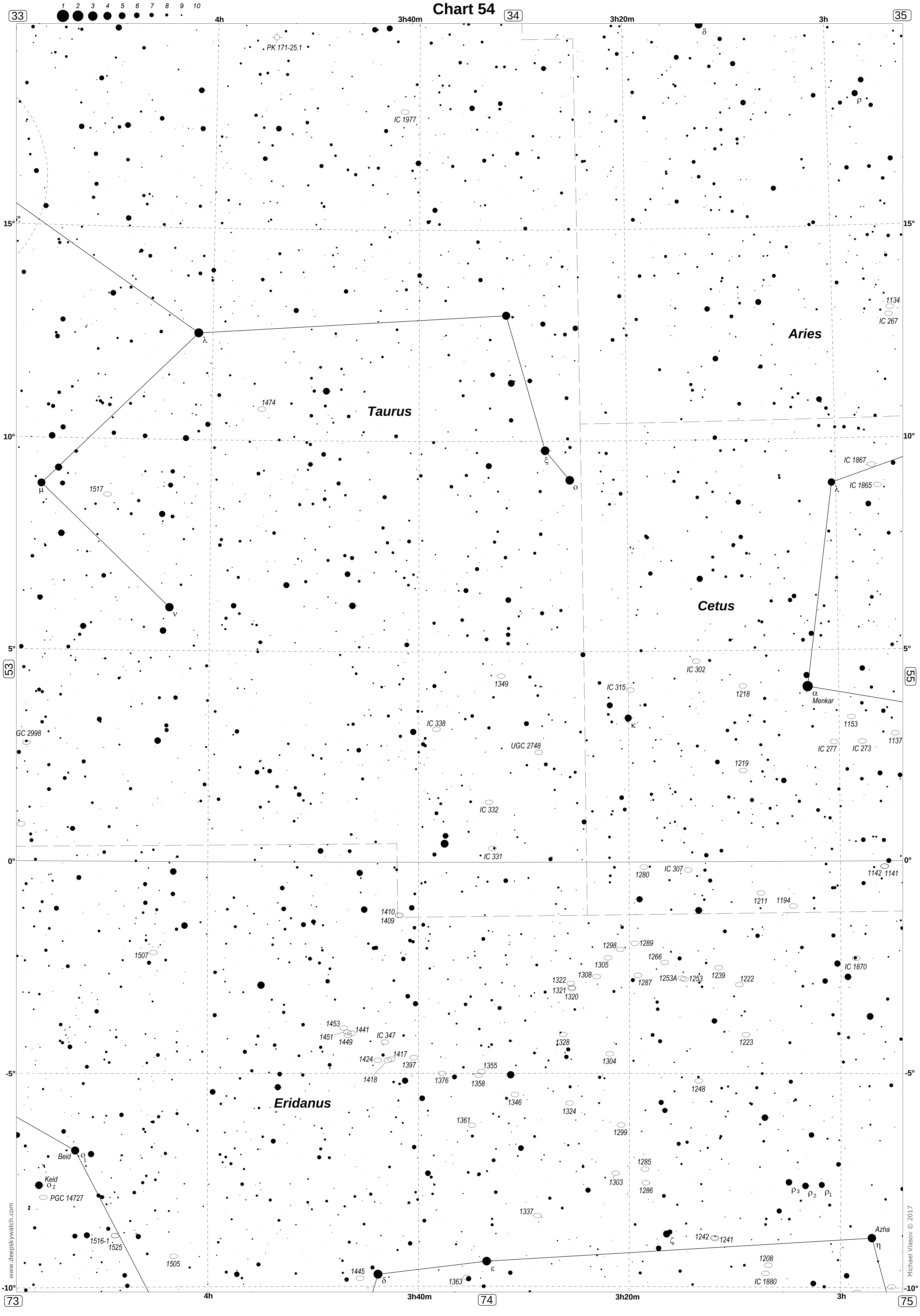
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Chart 53



1 2 3 4 5 6 7 8 9 10
32
33
34
52
54
72
73
74
5h20m
5h
4h40m
4h20m
15°
10°
5°
0°
-5°
-10°
Taurus
Orion
Eridanus
NGC 1555 - Hind's Variable Nebula
Be 84
1647
Aldebaran
α
σ
θ1
θ2
γ
δ1
δ2
δ3
ε
ρ
π
Mel 25 - Hyades
Cr 65
1817
1807
PGC 17069
ο1
ο2
1662
PK 190-17.1
π1
π2
π3
π4
π5
π6
μ
1517
1590
1633
MCG +01-14-037
1875
Bellatrix
UGC 3224
MCG +01-13-013
1819
UGC 3223
UGC 3087
UGC 3128
IC 412
IC 413
ψ
IC 392
1691
IC 365
IC 364
UGC 2998
1550
1762
1589
1587
1588
1593
1541
UGC 3258
UGC 3215
1671
1642
UGC 3214
1719
1713
1620
1586
1552
1635
1657
1654
1661
1638
1653
η
UGC 3105
1678
1670
1618
PGC 15620
1684
1682
1637
1622
1625
1788
1740
1729
The foxface nebula
1576
ξ
ν
PGC 16573
1612
1613
1611
1609
1607
1628
1599
1699
1700
1659
1601
IC 373
1677
1627
1621
1603
1600
1580
IC 2098
1656
1643
1924
Cursa
1665
1645
1604
ω
1594
1681
1667
NGC 1909
Witchhead Nebula
IC 2101
1666
τ
Beid
IC 387
IC 385
IC 389
1726
1720
Keid
1799
PGC 14727
1797
1752
Rigel
1646-1
1636
1614
λ
IC 402
1779
1525
1516-1
IC 382
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Chart 54



33
34
35
1 2 3 4 5 6 7 8 9 10
4h
3h40m
3h20m
3h
15°
10°
5°
0°
-5°
-10°
53
55
73
74
75
PK 171-25.1
IC 1977
Aries
Taurus
Cetus
Eridanus
1134
IC 267
1474
1517
IC 1867
IC 1865
Menkar
IC 302
IC 315
1218
1349
IC 338
UGC 2748
GC 2998
1153
IC 277
IC 273
1137
1219
IC 332
IC 331
1280
IC 307
1142
1141
1211
1194
1410
1409
1298
1289
1266
1305
1507
1322
1321
1320
1308
1287
1253A
1253
1239
1222
IC 1870
1453
1441
1451
1449
IC 347
1328
1223
1424
1417
1397
1418
1355
1376
1358
1304
1248
1346
1324
1361
1299
Beid
Keid
PGC 14727
1285
1303
1286
1337
1516-1
1525
1505
1242
1241
Azha
1208
IC 1880
1445
1363
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Chart 55

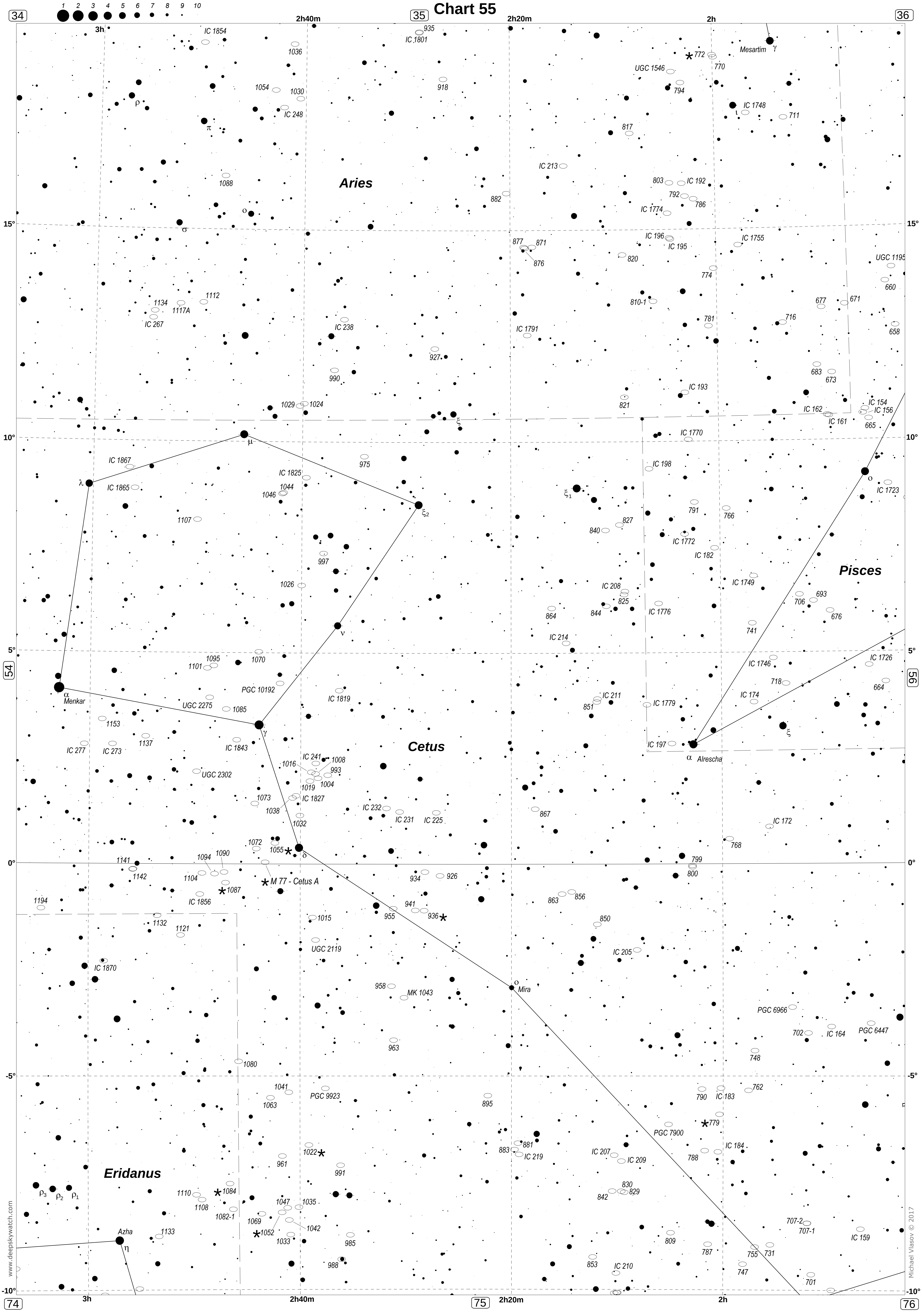
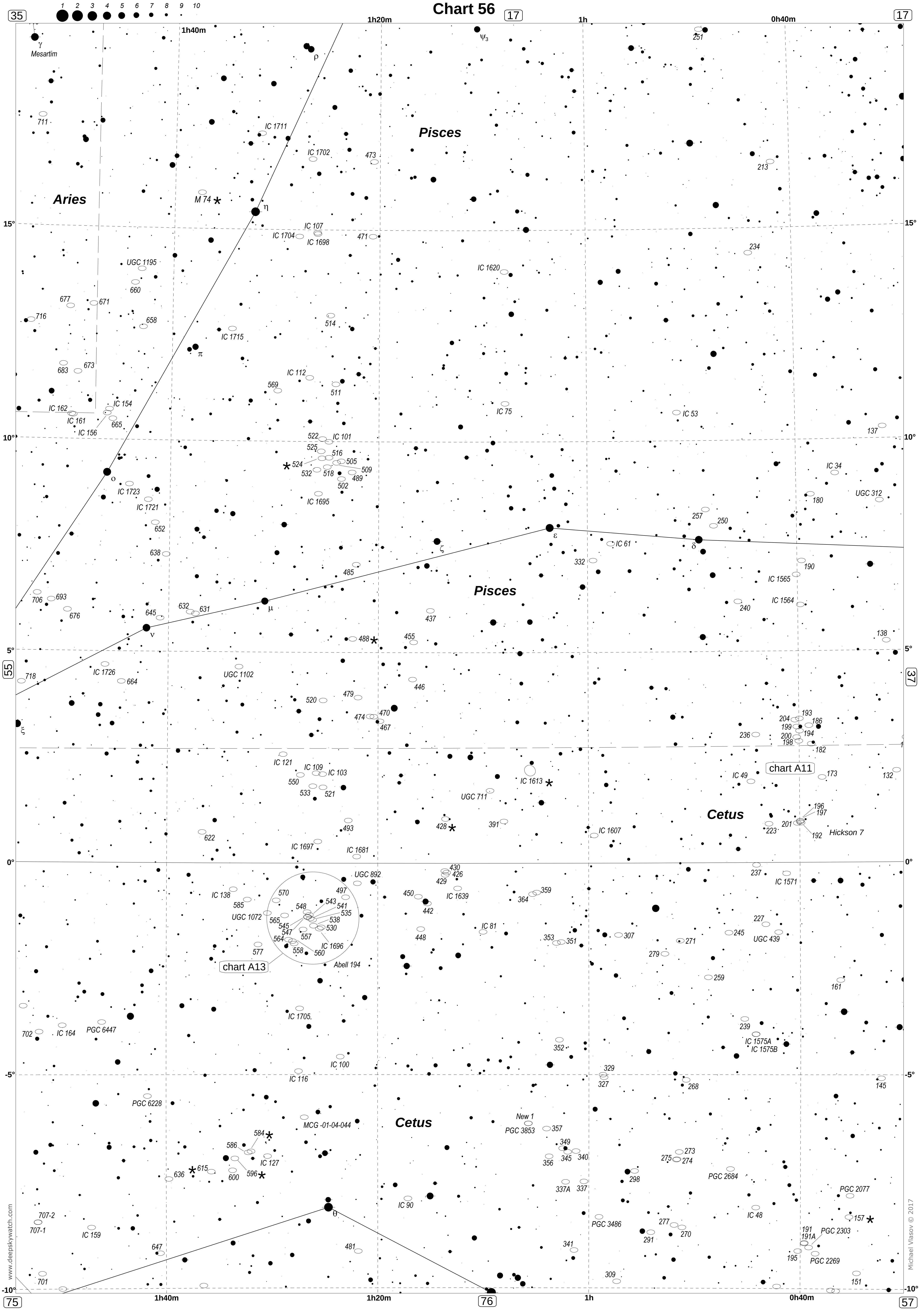
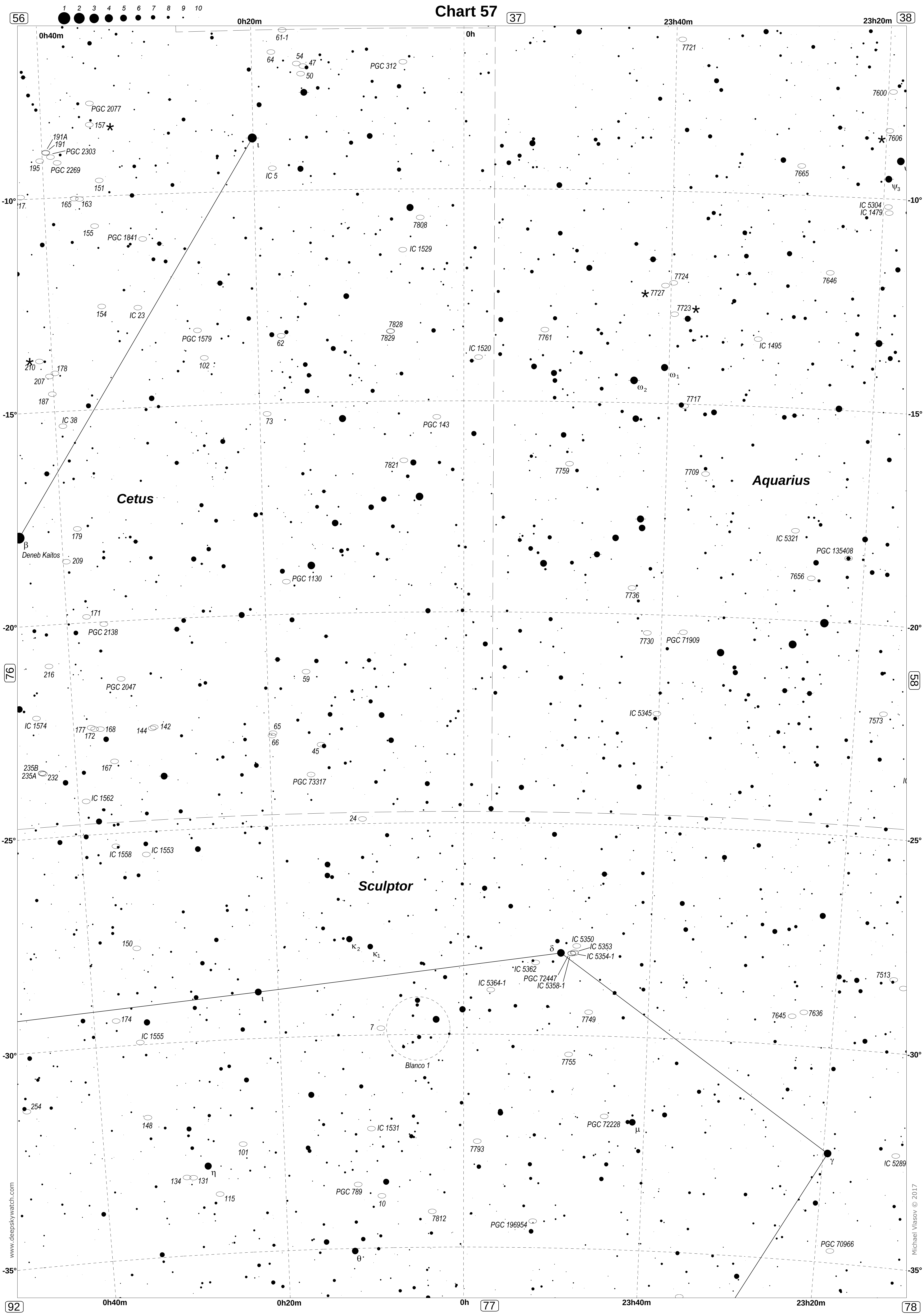

1 2 3 4 5 6 7 8 9 10
34
35
36
54
56
74
75
76
3h
2h40m
2h20m
2h
15°
10°
5°
0°
-5°
-10°
Aries
Cetus
Pisces
Eridanus
Mesartim
Menkar
Alrescha
Mira
Azha
M 77 - Cetus A
IC 1854
935
IC 1801
1036
772
770
UGC 1546
918
794
1054
1030
IC 248
IC 1748
711
817
IC 213
1088
803
IC 192
792
786
882
IC 1774
IC 196
IC 195
IC 1755
877
871
876
820
UGC 1195
774
660
1134
1112
1117A
IC 267
810-1
677
671
781
716
IC 238
IC 1791
658
927
990
683
673
IC 193
1029
1024
821
IC 154
IC 156
IC 162
IC 161
665
IC 1770
IC 1867
975
IC 1825
IC 198
1044
IC 1865
1046
IC 1723
791
766
1107
827
840
IC 1772
997
IC 182
IC 1749
1026
IC 208
825
693
706
676
864
844
IC 1776
741
IC 214
1095
1070
1101
IC 1746
IC 1726
718
PGC 10192
664
IC 1819
IC 211
IC 174
851
UGC 2275
1085
IC 1779
1153
1137
IC 277
IC 273
IC 1843
IC 197
IC 241
1008
1016
993
UGC 2302
1019
1004
1073
IC 1827
1038
IC 232
IC 231
IC 225
867
1032
IC 172
1072
1055
768
1141
1094
1090
799
1142
1104
934
926
800
1087
IC 1856
863
856
1194
941
955
936
1132
1015
850
1121
UGC 2119
IC 205
IC 1870
958
MK 1043
PGC 6966
702
IC 164
PGC 6447
963
748
1080
1041
762
1063
PGC 9923
895
790
IC 183
779
PGC 7900
881
883
IC 219
1022
IC 207
IC 209
788
IC 184
961
991
830
1110
1084
842
829
1108
1082-1
1047
1035
1069
1042
707-2
707-1
1133
1052
1033
985
809
787
755
731
IC 159
988
853
IC 210
747
701
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Chart 56



1 2 3 4 5 6 7 8 9 10
35
17
1h40m
1h20m
1h
0h40m
γ
Mesartim
ρ
ψ3
251
711
IC 1711
Pisces
IC 1702
473
213
Aries
M 74
η
15°
IC 107
IC 1704
IC 1698
471
234
UGC 1195
IC 1620
660
677
671
716
658
514
IC 1715
π
683
673
IC 112
569
511
IC 162
IC 154
IC 161
665
IC 156
IC 75
IC 53
137
10°
522
IC 101
525
516
505
524
509
532
518
489
502
IC 34
ο
IC 1723
UGC 312
180
IC 1721
IC 1695
257
250
652
ε
IC 61
ζ
δ
638
332
485
190
IC 1565
Pisces
706
693
IC 1564
676
645
632
631
μ
240
437
ν
488
455
138
5°
55
718
IC 1726
UGC 1102
664
446
37
520
479
474
470
467
193
204
186
199
194
236
200
198
182
ξ
IC 121
IC 109
IC 103
chart A11
550
IC 1613
IC 49
173
132
533
521
UGC 711
Cetus
196
197
201
622
493
428
391
IC 1607
223
192
Hickson 7
IC 1697
IC 1681
0°
430
UGC 892
426
237
IC 1571
497
429
IC 138
570
450
IC 1639
359
585
548
543
541
442
364
UGC 1072
565
535
545
538
227
547
530
IC 81
564
557
245
353
351
307
271
UGC 439
IC 1696
577
558
560
279
chart A13
Abell 194
259
161
IC 1705
239
702
IC 164
PGC 6447
IC 1575A
IC 1575B
352
IC 100
-5°
329
IC 116
327
268
145
PGC 6228
New 1
Cetus
MCG -01-04-044
PGC 3853
357
584
349
586
273
IC 127
345
340
275
274
636
615
356
596
600
298
PGC 2684
337A
337
PGC 2077
707-2
IC 90
IC 48
157
707-1
IC 159
θ
PGC 3486
277
191
291
270
191A
PGC 2303
647
481
341
195
PGC 2269
309
151
701
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-10°
75
76
57

Chart 57


56
37
38
76
58
92
77
78
1 2 3 4 5 6 7 8 9 10
0h40m
0h20m
0h
23h40m
23h20m
-10°
-15°
-20°
-25°
-30°
-35°
Cetus
Aquarius
Sculptor
Deneb Kaitos
Blanco 1
61-1
64
54
47
50
PGC 312
7721
PGC 2077
157
191A
191
PGC 2303
195
PGC 2269
IC 5
151
165
163
7600
7606
7665
IC 5304
IC 1479
155
PGC 1841
7808
IC 1529
7646
7724
7727
7723
154
IC 23
7828
7829
PGC 1579
62
7761
IC 1520
IC 1495
210
178
207
102
187
7717
IC 38
73
PGC 143
7821
7759
7709
179
IC 5321
PGC 135408
209
PGC 1130
7656
7736
171
PGC 2138
7730
PGC 71909
216
59
PGC 2047
IC 1574
177
168
172
144
142
65
66
45
IC 5345
7573
167
235B
235A
232
PGC 73317
IC 1562
24
IC 1558
IC 1553
150
IC 5350
IC 5353
IC 5354-1
IC 5362
PGC 72447
IC 5358-1
IC 5364-1
7513
174
7749
7645
7636
IC 1555
7
7755
254
148
PGC 72228
IC 1531
101
7793
IC 5289
134
131
115
PGC 789
10
7812
PGC 196954
PGC 70966
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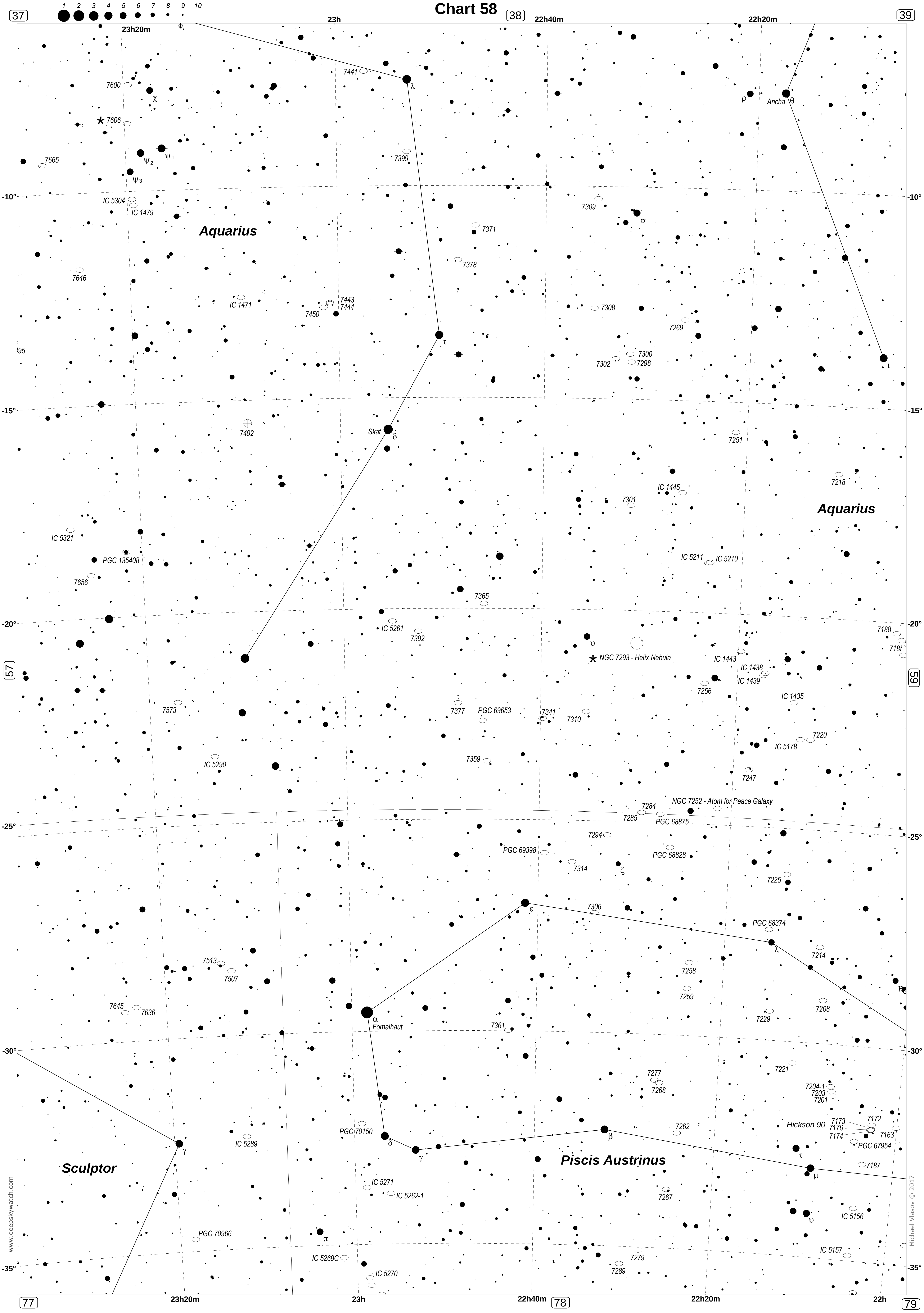

1 2 3 4 5 6 7 8 9 10
37
38
39
57
59
77
78
79
23h20m
23h
22h40m
22h20m
22h
-10°
-15°
-20°
-25°
-30°
-35°
Aquarius
Aquarius
Sculptor
Piscis Austrinus
Skat
Ancha
Fomalhaut
NGC 7293 - Helix Nebula
NGC 7252 - Atom for Peace Galaxy
Hickson 90
7600
7606
7665
7441
7399
IC 5304
IC 1479
7309
7371
7378
7646
IC 1471
7443
7444
7450
7308
7269
7300
7298
7302
7492
7251
7218
IC 1445
7301
IC 5321
PGC 135408
7656
IC 5211
IC 5210
7365
IC 5261
7392
7188
IC 1443
IC 1438
IC 1439
7256
IC 1435
7573
7377
PGC 69653
7341
7310
7220
IC 5178
IC 5290
7359
7247
7284
7285
PGC 68875
7294
PGC 69398
PGC 68828
7314
7225
7306
PGC 68374
7214
7513
7507
7258
7259
7645
7636
7361
7229
7208
7277
7268
7221
7204-1
7203
7201
PGC 70150
IC 5289
7262
7173
7172
7176
7174
7163
PGC 67954
7187
IC 5271
IC 5262-1
7267
IC 5156
PGC 70966
IC 5269C
IC 5270
7279
7289
IC 5157
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Chart 59

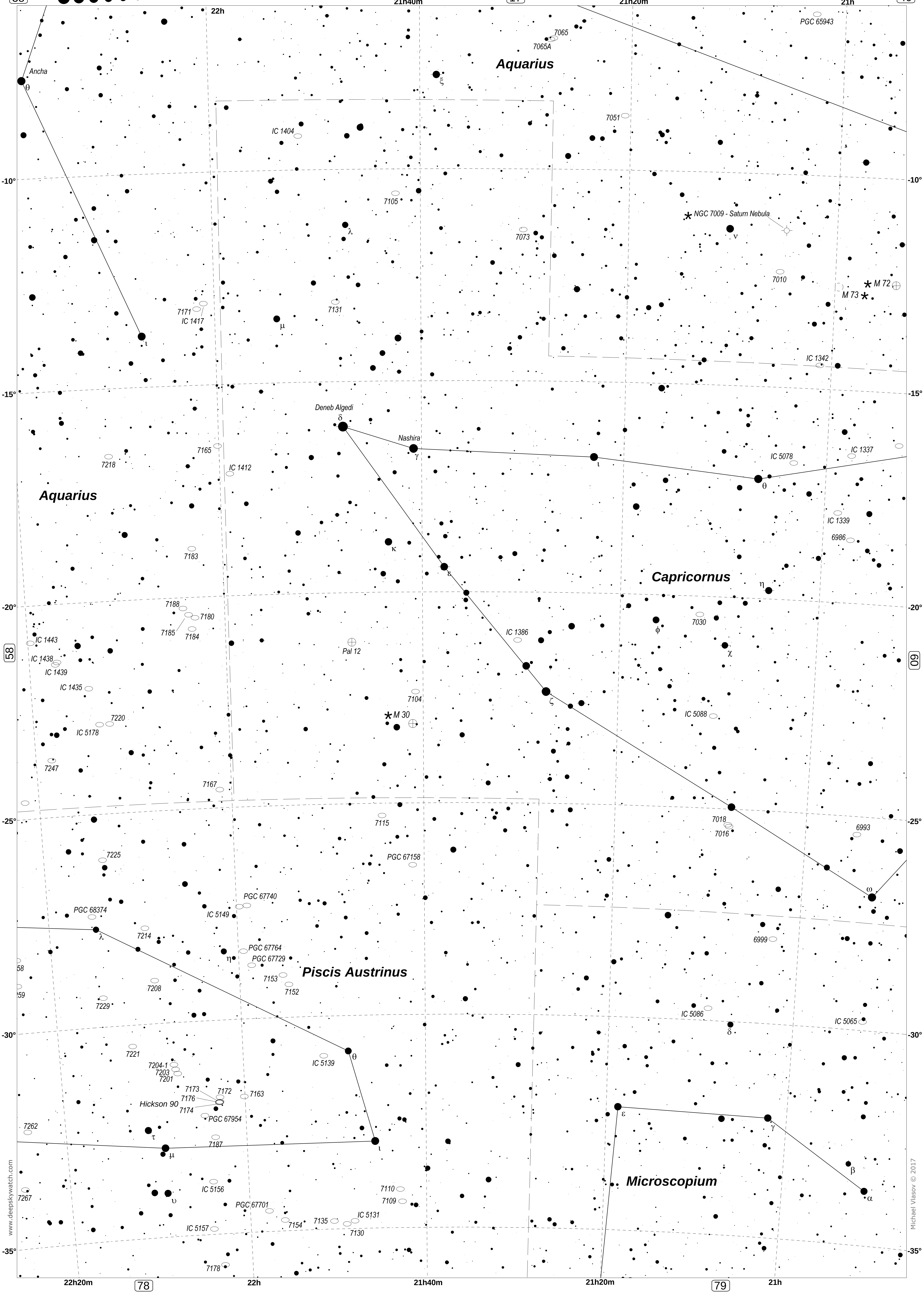
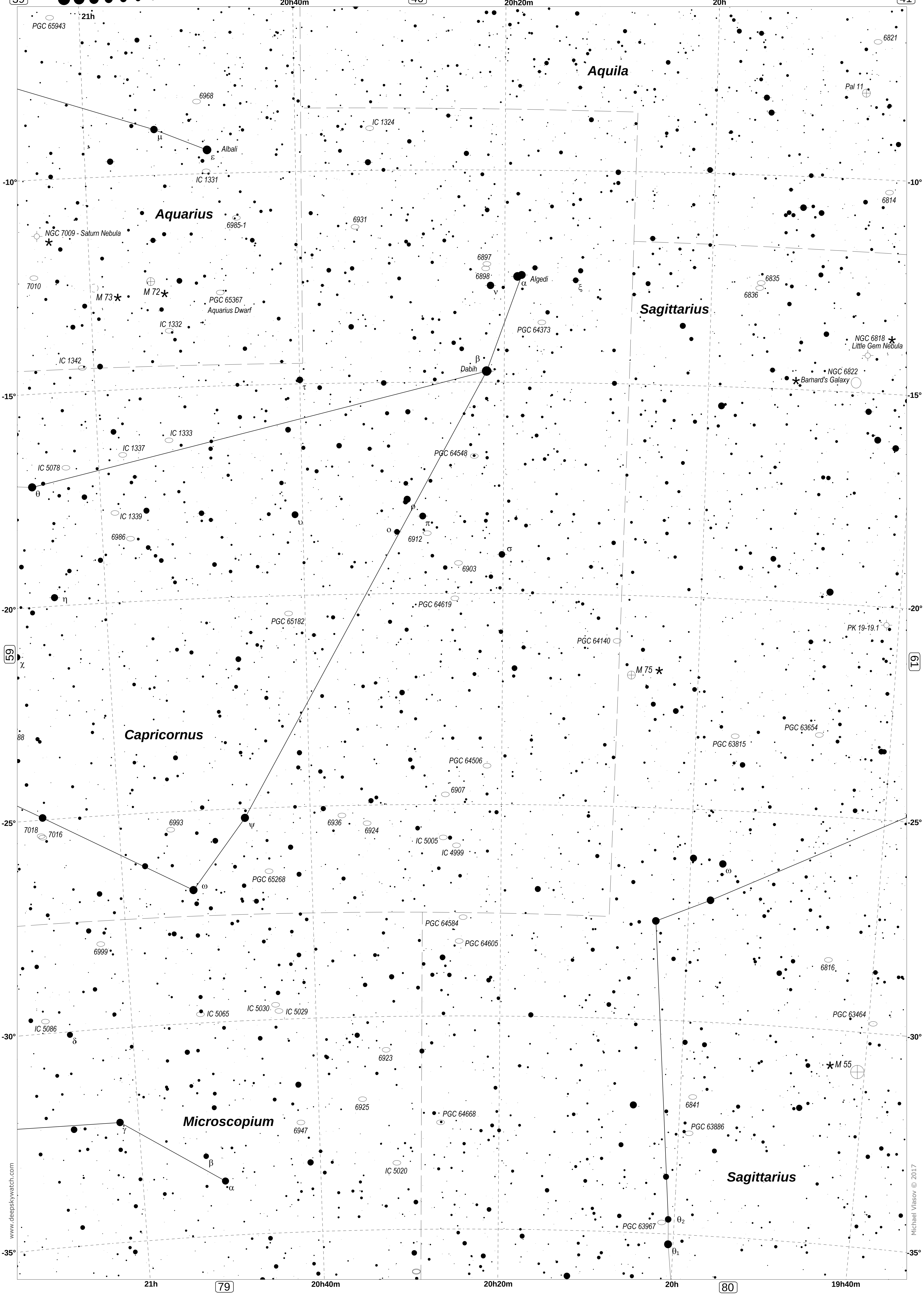

38
17
40
58
60
78
79
1 2 3 4 5 6 7 8 9 10
22h
21h40m
21h20m
21h
22h20m
-10°
-15°
-20°
-25°
-30°
-35°
Aquarius
Capricornus
Piscis Austrinus
Microscopium
Ancha
Deneb Algedi
Nashira
NGC 7009 - Saturn Nebula
M 72
M 73
M 30
Pal 12
Hickson 90
PGC 65943
7065
7065A
7051
IC 1404
7105
7073
7010
7131
7171
IC 1417
IC 1342
7165
IC 1412
7218
IC 5078
IC 1337
IC 1339
6986
7183
7188
7180
7185
7184
IC 1443
IC 1438
IC 1439
IC 1435
IC 1386
7030
7104
IC 5088
7220
IC 5178
7247
7167
7115
7018
7016
6993
7225
PGC 67158
PGC 67740
IC 5149
PGC 68374
7214
6999
PGC 67764
PGC 67729
7153
7152
7208
7229
IC 5086
IC 5065
7221
IC 5139
7204-1
7203
7201
7173
7172
7163
7176
7174
PGC 67954
7262
7187
IC 5156
7110
7109
7267
PGC 67701
7154
7135
IC 5131
7130
IC 5157
7178
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Chart 60

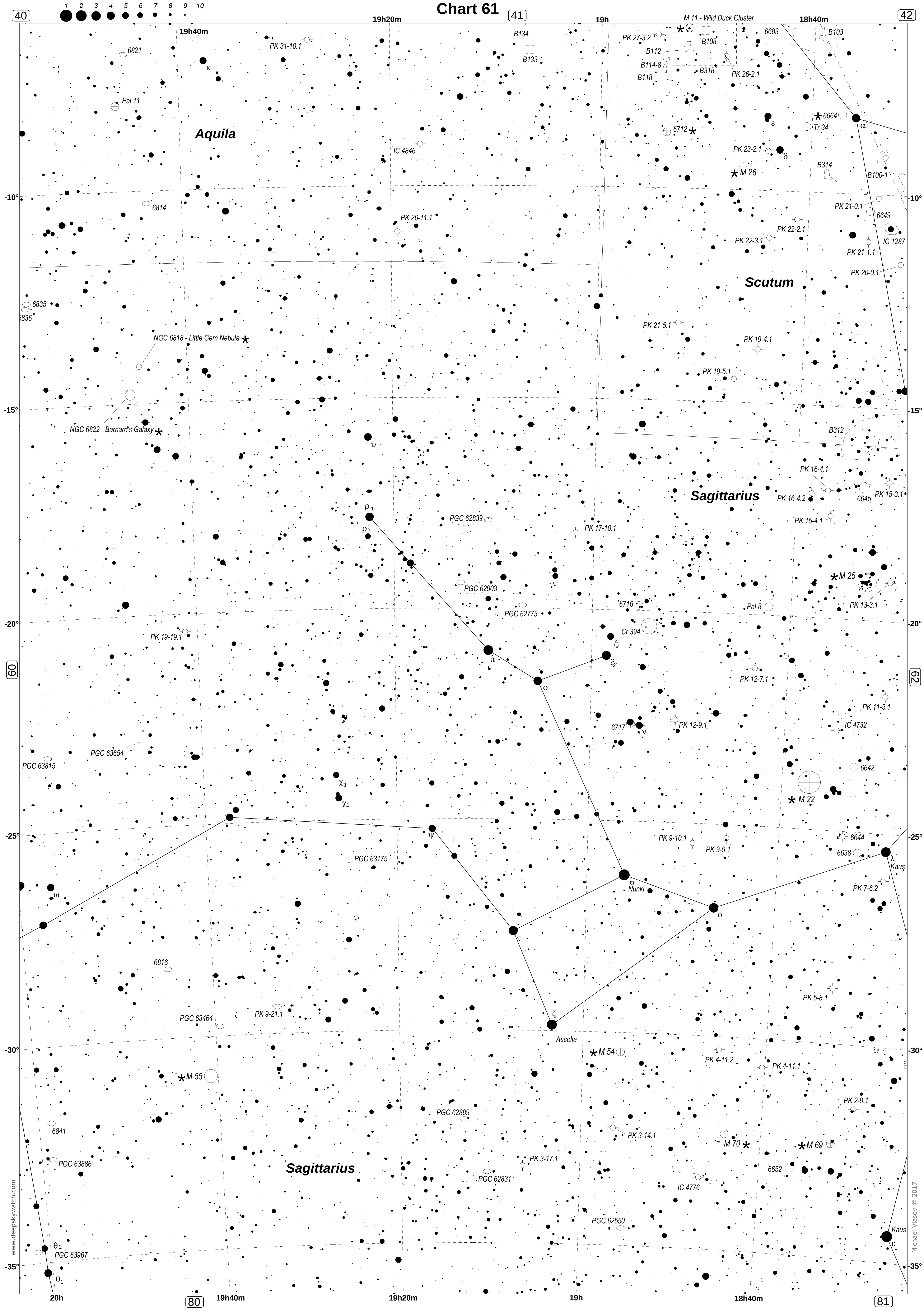
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1 2 3 4 5 6 7 8 9 10



59 61 79 80

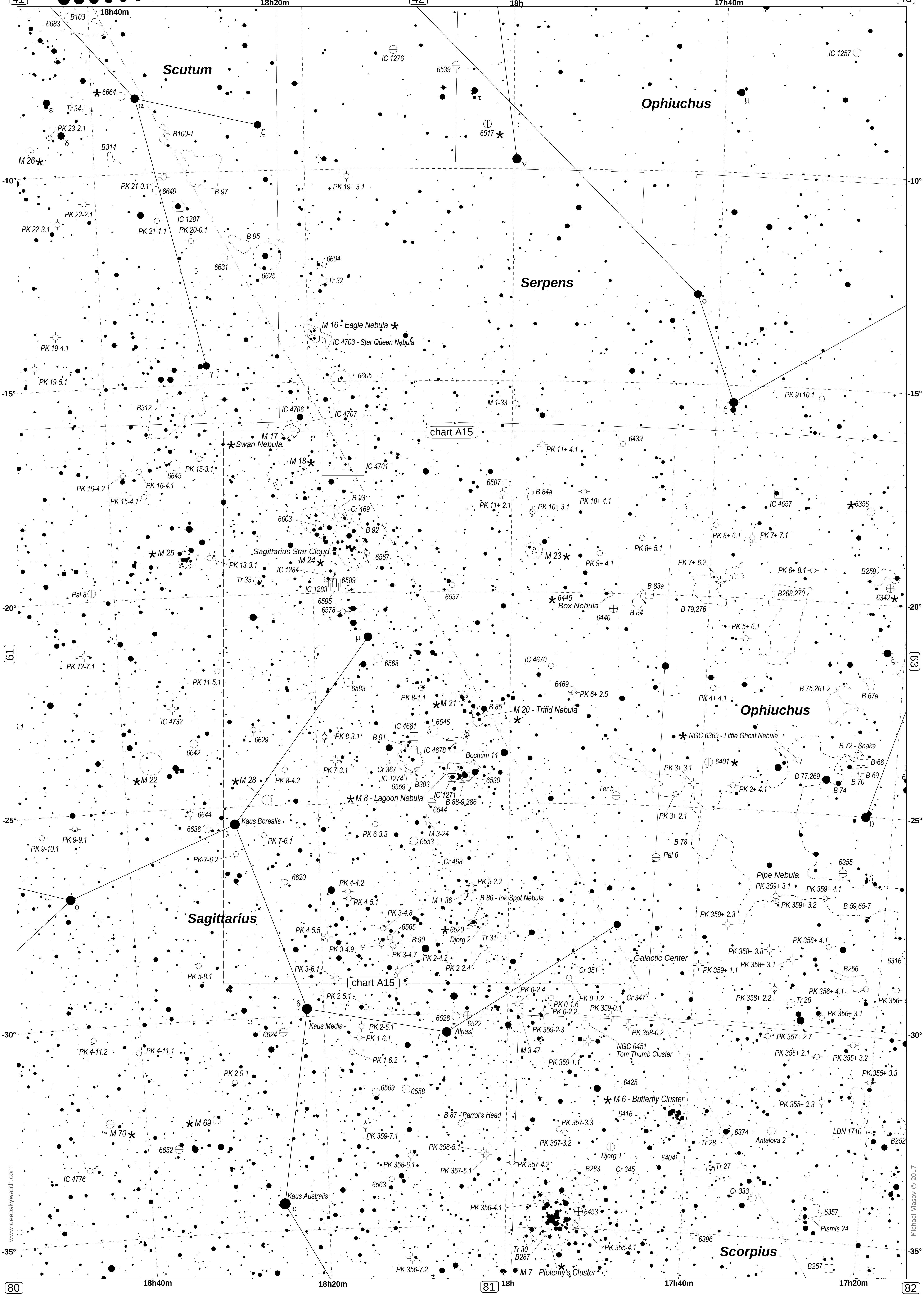
Chart 61



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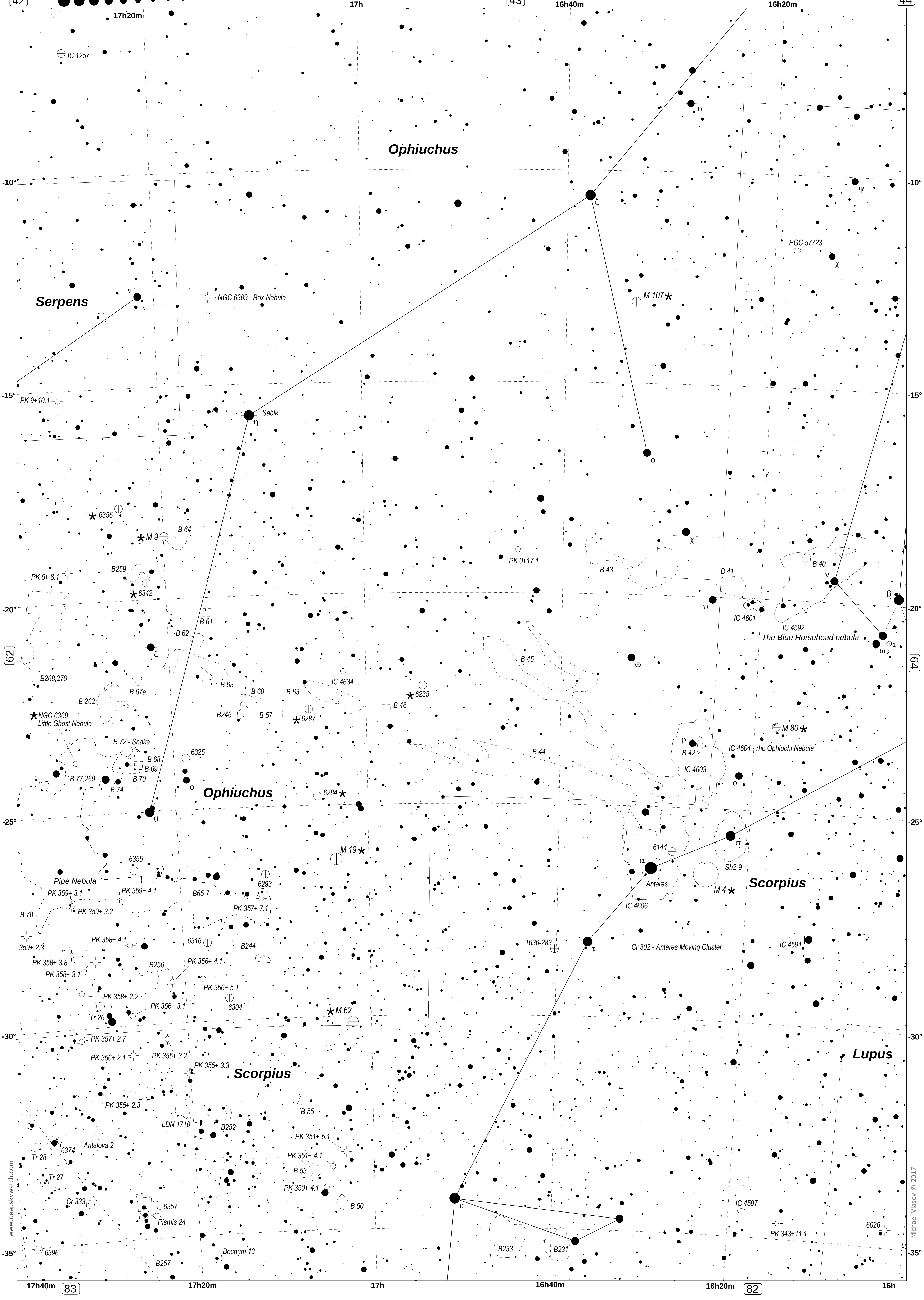
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Chart 62



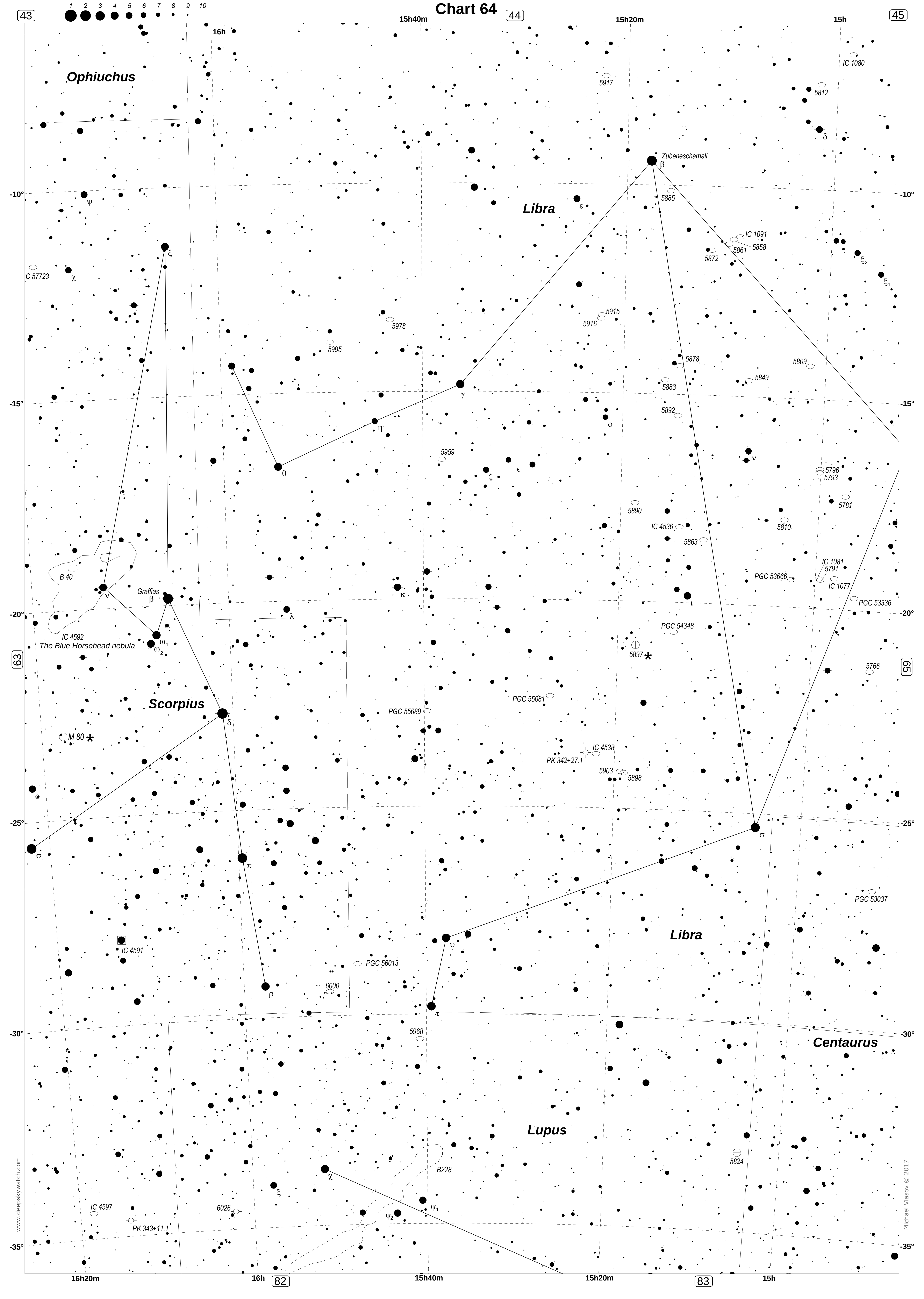
1 2 3 4 5 6 7 8 9 10
41
42
43
18h40m
18h20m
18h
17h40m
Scutum
Ophiuchus
Serpens
Sagittarius
Scorpius
B103
6683
IC 1276
6539
IC 1257
6664
Tr 34
PK 23-2.1
B100-1
B314
M 26
6517
PK 21-0.1
6649
B 97
PK 19+ 3.1
PK 22-2.1
IC 1287
PK 22-3.1
PK 21-1.1
PK 20-0.1
B 95
6604
6631
6625
Tr 32
M 16 - Eagle Nebula
IC 4703 - Star Queen Nebula
PK 19-4.1
6605
PK 19-5.1
-10°
-15°
-20°
-25°
-30°
-35°
B312
IC 4706
IC 4707
M 1-33
PK 9+10.1
chart A15
M 17
Swan Nebula
M 18
IC 4701
PK 11+ 4.1
6439
PK 15-3.1
6645
PK 16-4.2
PK 16-4.1
PK 15-4.1
6507
B 84a
PK 11+ 2.1
PK 10+ 4.1
PK 10+ 3.1
IC 4657
6356
B 93
Cr 469
6603
B 92
PK 8+ 6.1
PK 7+ 7.1
M 25
Sagittarius Star Cloud
M 24
6567
M 23
PK 8+ 5.1
PK 9+ 4.1
PK 13-3.1
IC 1284
PK 7+ 6.2
PK 6+ 8.1
B259
Tr 33
IC 1283
6589
6595
6537
B 83a
Pal 8
6445
Box Nebula
6342
B268,270
6578
B 84
6440
B 79,276
PK 12-7.1
6568
PK 5+ 6.1
IC 4670
PK 11-5.1
6583
6469
PK 6+ 2.5
B 75,261-2
B 67a
PK 8-1.1
M 21
PK 4+ 4.1
6546
B 85
M 20 - Trifid Nebula
IC 4732
6629
PK 8-3.1
IC 4681
B 91
NGC 6369 - Little Ghost Nebula
6642
IC 4678
B 72 - Snake
Bochum 14
6401
B 68
PK 7-3.1
Cr 367
IC 1274
6559
B303
6530
PK 3+ 3.1
B 77,269
B 69
B 70
B 74
M 22
M 28
PK 8-4.2
M 8 - Lagoon Nebula
IC 1271
B 88-9,286
Ter 5
PK 2+ 4.1
6544
PK 3+ 2.1
6644
6638
Kaus Borealis
PK 9-9.1
PK 9-10.1
PK 6-3.3
M 3-24
6553
PK 7-6.1
B 78
PK 7-6.2
Pal 6
Cr 468
6355
Pipe Nebula
6620
PK 4-4.2
PK 3-2.2
PK 359+ 3.1
PK 359+ 4.1
PK 4-5.1
M 1-36
B 86 - Ink Spot Nebula
PK 359+ 3.2
B 59,65-7
PK 3-4.8
PK 359+ 2.3
6565
6520
PK 4-5.5
Djorg 2
Tr 31
PK 3-4.9
B 90
PK 3-4.7
PK 2-4.2
PK 358+ 4.1
PK 358+ 3.8
Galactic Center
PK 358+ 3.1
PK 5-8.1
PK 359+ 1.1
PK 3-6.1
PK 2-2.4
Cr 351
6316
B256
PK 2-5.1
PK 0-2.4
PK 0-1.2
PK 0-1.6
PK 0-2.2
Cr 347
PK 358+ 2.2
PK 356+ 4.1
Tr 26
PK 356+ 3.1
Kaus Media
6528
6522
PK 359-0.1
Alnasl
PK 358-0.2
6624
PK 2-6.1
PK 359-2.3
PK 357+ 2.7
PK 1-6.1
M 3-47
NGC 6451
Tom Thumb Cluster
PK 4-11.2
PK 4-11.1
PK 1-6.2
PK 359-1.1
PK 356+ 2.1
PK 355+ 3.2
PK 355+ 3.3
PK 2-9.1
6425
6569
6558
M 6 - Butterfly Cluster
PK 355+ 2.3
B 87 - Parrot's Head
6416
M 69
PK 357-3.3
M 70
PK 359-7.1
Tr 28
6374
Antalova 2
LDN 1710
6652
PK 357-3.2
B252
PK 358-5.1
Djorg 1
IC 4776
PK 358-6.1
PK 357-5.1
PK 357-4.2
6404
Tr 27
B283
Cr 345
6563
Cr 333
Kaus Australis
PK 356-4.1
6453
6357
Pismis 24
6396
Tr 30
PK 355-4.1
B287
PK 356-7.2
M 7 - Ptolemy's Cluster
B257
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61
63
80
81
82

Chart 63



1 2 3 4 5 6 7 8 9 10
42
43
44
62
64
83
82
17h20m
17h
16h40m
16h20m
17h40m
16h
-10°
-15°
-20°
-25°
-30°
-35°
IC 1257
Ophiuchus
Serpens
NGC 6309 - Box Nebula
PGC 57723
M 107
PK 9+10.1
Sabik
6356
M 9
B 64
PK 0+17.1
B 43
B 41
B 40
PK 6+ 8.1
B259
6342
IC 4601
IC 4592
The Blue Horsehead nebula
B 61
B 62
B 45
B268,270
B 67a
B 63
B 60
IC 4634
6235
B 262
B246
B 57
6287
B 46
NGC 6369
Little Ghost Nebula
M 80
B 72 - Snake
B 68
B 69
6325
B 44
B 42
IC 4604 - rho Ophiuchi Nebula
IC 4603
B 77,269
B 74
B 70
6284
M 19
6144
Sh2-9
6355
Pipe Nebula
6293
Antares
Scorpius
M 4
PK 359+ 3.1
PK 359+ 4.1
B65-7
PK 357+ 7.1
IC 4606
PK 359+ 3.2
B 78
359+ 2.3
PK 358+ 4.1
6316
B244
1636-283
Cr 302 - Antares Moving Cluster
IC 4591
PK 358+ 3.8
PK 358+ 3.1
B256
PK 356+ 4.1
PK 356+ 5.1
PK 358+ 2.2
PK 356+ 3.1
6304
Tr 26
M 62
PK 357+ 2.7
PK 356+ 2.1
PK 355+ 3.2
PK 355+ 3.3
Lupus
PK 355+ 2.3
B 55
LDN 1710
B252
Antalova 2
6374
Tr 28
PK 351+ 5.1
PK 351+ 4.1
B 53
Tr 27
PK 350+ 4.1
Cr 333
6357
Pismis 24
B 50
IC 4597
PK 343+11.1
6026
B233
B231
6396
Bochum 13
B257
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Chart 64



43
44
45
63
65
82
83
1 2 3 4 5 6 7 8 9 10
16h
15h40m
15h20m
15h
16h20m
-10°
-15°
-20°
-25°
-30°
-35°
Ophiuchus
Libra
Scorpius
Lupus
Centaurus
Zubeneschamali
Graffias
IC 4592
The Blue Horsehead nebula
B 40
M 80
IC 4591
IC 4597
PK 343+11.1
6026
B228
5824
5968
6000
PGC 56013
PGC 55689
PGC 55081
IC 4538
PK 342+27.1
5903
5898
5897
PGC 54348
5766
PGC 53037
PGC 53336
PGC 53666
IC 1081
5791
IC 1077
5863
IC 4536
5890
5810
5781
5796
5793
5892
5883
5878
5849
5809
5915
5916
5885
IC 1091
5858
5861
5872
5917
5812
IC 1080
5978
5995
5959
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Chart 65

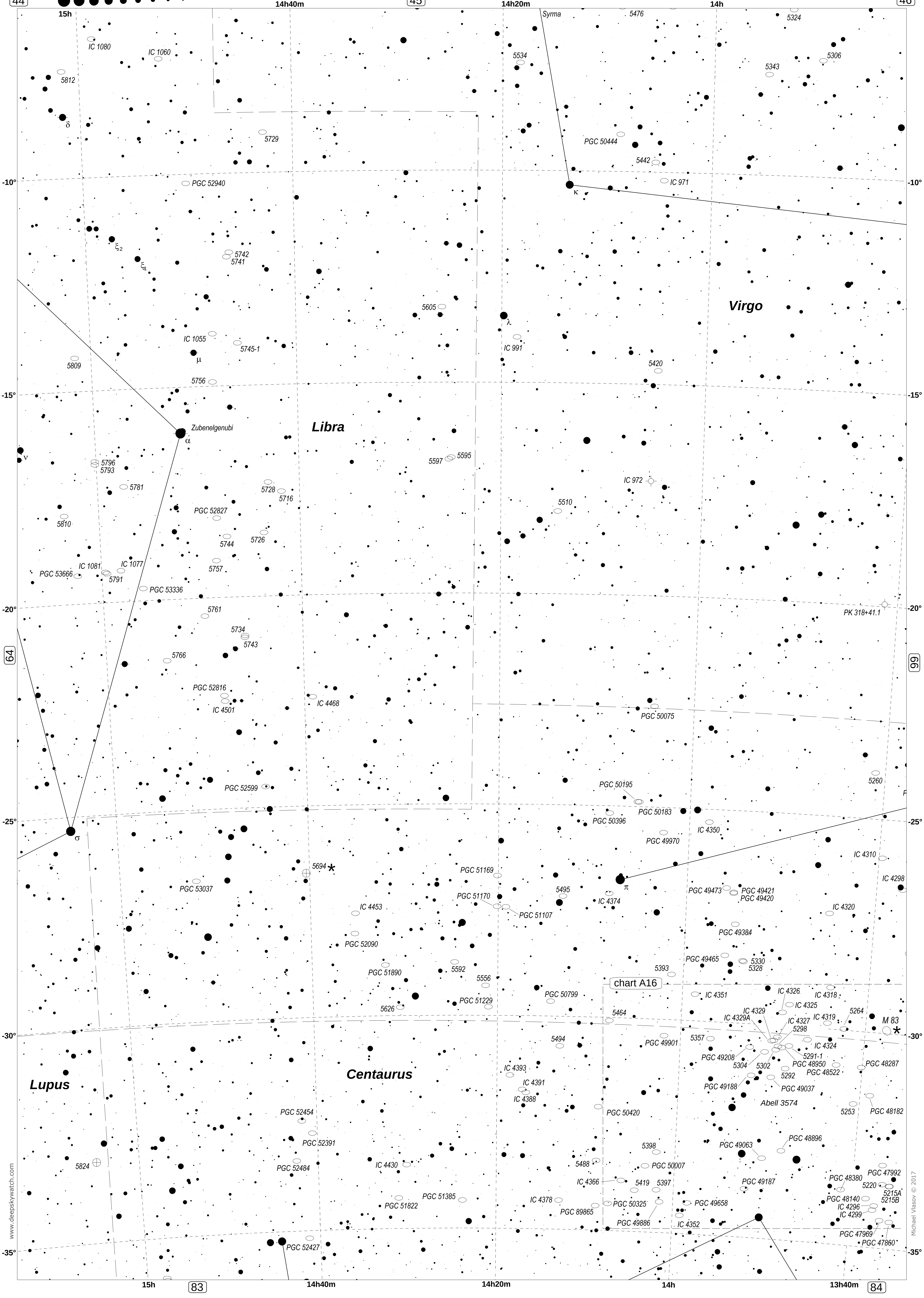

44
45
46
64
66
83
84
15h
14h40m
14h20m
14h
13h40m
-10°
-15°
-20°
-25°
-30°
-35°
Libra
Virgo
Centaurus
Lupus
Zubenelgenubi
Syrma
chart A16
M 83
Abell 3574
IC 1080
IC 1060
5812
5729
PGC 52940
5742
5741
5605
IC 1055
5745-1
5809
5756
IC 991
5420
5534
5476
5324
5306
5343
PGC 50444
5442
IC 971
5796
5793
5781
5728
5716
5597
5595
IC 972
5510
PGC 52827
5810
5744
5726
5757
IC 1081
IC 1077
PGC 53666
5791
PGC 53336
PK 318+41.1
5761
5734
5743
5766
PGC 52816
IC 4501
IC 4468
PGC 50075
5260
PGC 52599
PGC 50195
PGC 50183
PGC 50396
IC 4350
PGC 49970
IC 4310
IC 4298
5694
PGC 53037
PGC 51169
PGC 51170
PGC 51107
5495
IC 4374
PGC 49473
PGC 49421
PGC 49420
IC 4453
IC 4320
PGC 52090
PGC 49384
PGC 51890
5592
PGC 49465
5330
5328
5556
PGC 51229
5393
5626
PGC 50799
IC 4351
IC 4326
IC 4318
IC 4325
5464
IC 4329
IC 4329A
IC 4327
IC 4319
5264
5298
5494
PGC 49901
5357
IC 4324
PGC 49208
5291-1
5304
5302
PGC 48950
PGC 48522
PGC 48287
IC 4393
IC 4391
IC 4388
5292
PGC 49188
PGC 49037
5253
PGC 48182
PGC 52454
PGC 50420
PGC 52391
PGC 49063
PGC 48896
5824
PGC 52484
IC 4430
5398
5488
PGC 50007
IC 4366
5419
5397
PGC 49187
PGC 47992
PGC 48380
5220
5215A
5215B
PGC 48140
IC 4296
IC 4299
PGC 51822
PGC 51385
IC 4378
PGC 89865
PGC 50325
PGC 49886
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IC 4352
PGC 47969
PGC 47860
PGC 52427
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Chart 66

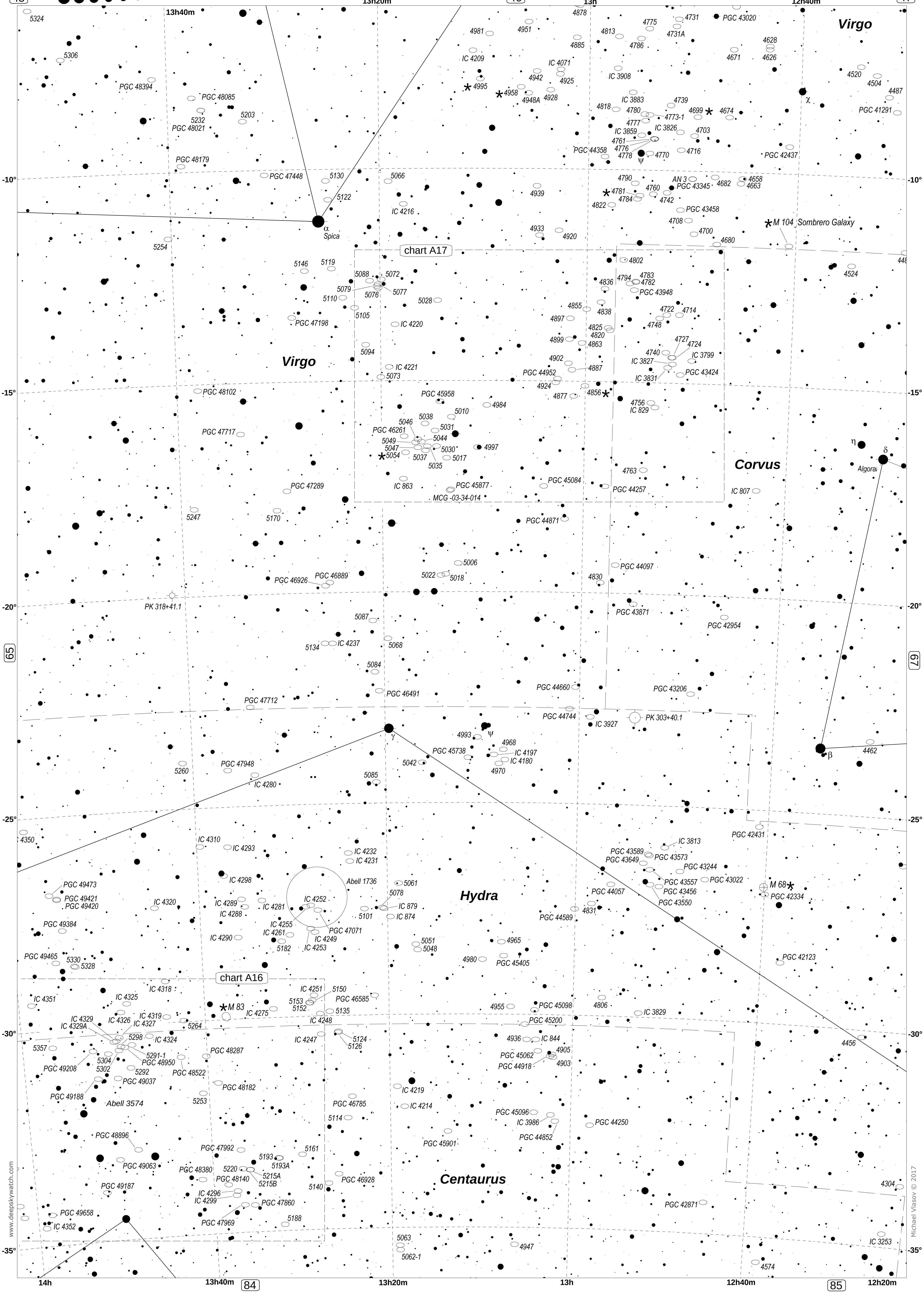
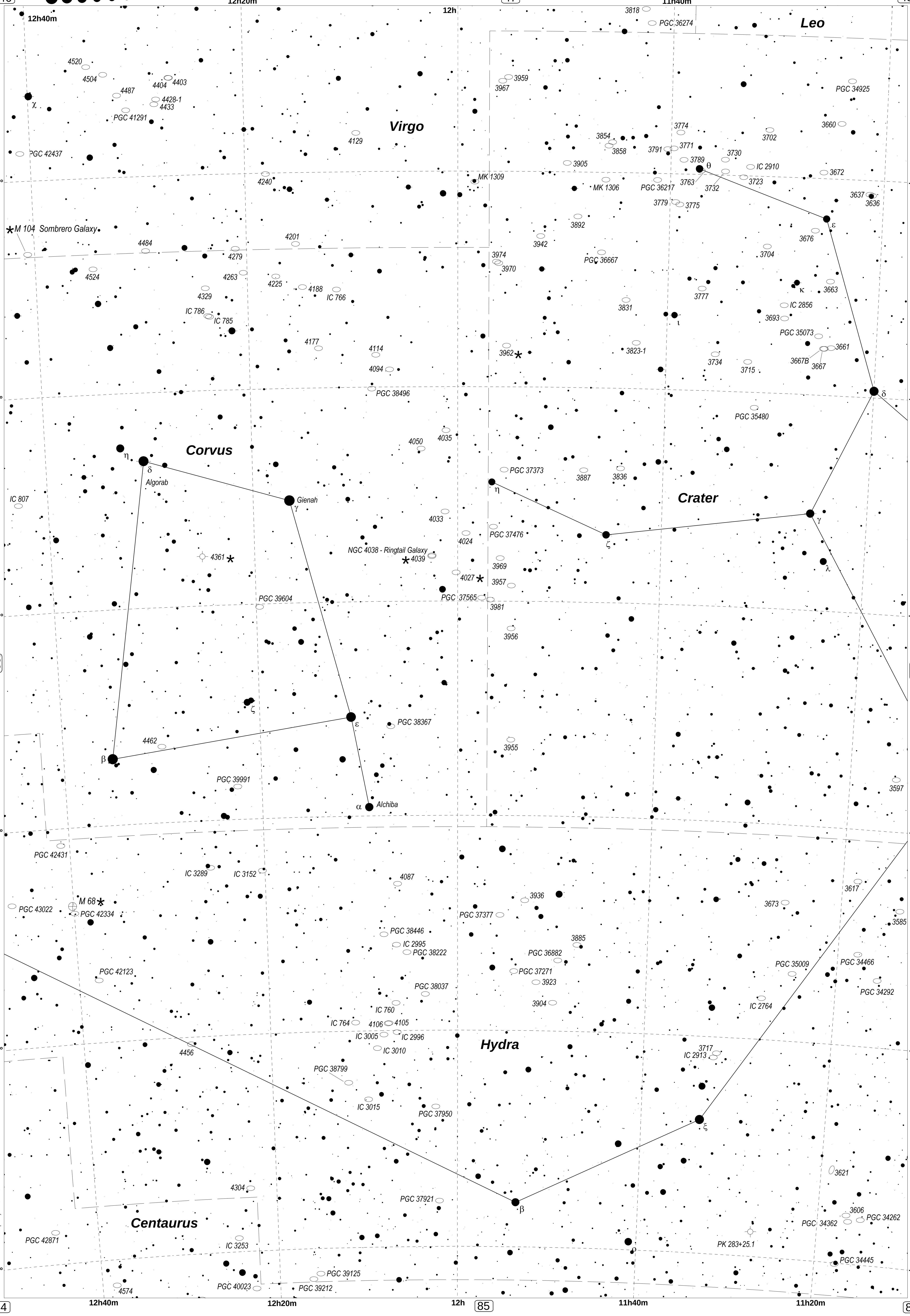

1 2 3 4 5 6 7 8 9 10
45
46
47
13h40m
13h20m
13h
12h40m
Virgo
Virgo
Corvus
Hydra
Centaurus
α Spica
M 104 Sombrero Galaxy
chart A17
chart A16
M 83
M 68
Abell 1736
Abell 3574
PK 318+41.1
PK 303+40.1
Algorab
η
δ
β
γ
ψ
χ
-10°
-15°
-20°
-25°
-30°
-35°
65
67
84
85
14h
13h40m
13h20m
13h
12h40m
12h20m
5324
5306
PGC 48394
PGC 48085
5232
PGC 48021
5203
PGC 48179
PGC 47448
5130
5122
5066
5254
5146
5119
5088
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5077
5110
5105
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5017
5035
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MCG -03-34-014
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4878
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4731
PGC 43020
4981
4951
4813
4731A
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4885
4628
4626
4671
IC 4209
IC 4071
IC 3908
4942
4925
4520
4504
4995
4958
4948A
4928
4487
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IC 3883
4739
4818
4780
4773-1
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4674
4777
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IC 3859
4761
4703
4776
4778
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4716
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4790
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4682
4760
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4781
4784
4742
4822
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4920
4700
4680
4802
4483
4524
4836
4794
4783
4782
PGC 43948
4855
4838
4722
4714
4897
4748
4825
4820
4899
4863
4727
4724
4740
IC 3827
IC 3799
4902
4887
PGC 44952
IC 3831
PGC 43424
4924
4877
4856
4756
IC 829
4763
PGC 45084
PGC 44257
IC 807
PGC 44871
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5018
PGC 46926
PGC 46889
4830
PGC 44097
PGC 43871
PGC 42954
5087
5134
IC 4237
5068
5084
PGC 46491
PGC 47712
PGC 44660
PGC 43206
PGC 44744
IC 3927
4993
4968
IC 4197
PGC 45738
IC 4180
4970
5042
4462
5260
PGC 47948
IC 4280
5085
4350
IC 4310
IC 4293
IC 4232
IC 4231
IC 3813
PGC 43589
PGC 43573
PGC 43649
PGC 43244
PGC 42431
IC 4298
5061
PGC 43557
PGC 43022
PGC 49473
PGC 49421
PGC 49420
5078
PGC 44057
PGC 43456
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IC 4320
IC 4289
IC 4288
IC 4281
IC 4252
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IC 879
IC 874
PGC 43550
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PGC 44589
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IC 4261
PGC 47071
IC 4249
IC 4290
5182
IC 4253
4965
5051
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PGC 49465
5330
5328
4980
PGC 45405
PGC 42123
IC 4318
IC 4251
5150
IC 4351
IC 4325
5153
5152
PGC 46585
5135
IC 4275
4955
PGC 45098
4806
IC 3829
IC 4329
IC 4329A
IC 4326
IC 4319
IC 4327
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IC 4248
PGC 45200
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IC 4324
IC 4247
5124
5126
4936
IC 844
5357
5291-1
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4456
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5302
5292
PGC 48522
PGC 49037
PGC 48182
PGC 49188
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5253
IC 4214
PGC 46785
PGC 45096
IC 3986
PGC 44250
5114
PGC 44852
PGC 48896
PGC 45901
PGC 47992
5193
5161
5193A
PGC 49063
PGC 48380
5220
5215A
PGC 48140
5215B
PGC 46928
5140
PGC 49187
IC 4296
IC 4299
PGC 47860
4304
PGC 42871
PGC 49658
PGC 47969
5188
IC 4352
5063
5062-1
4947
IC 3253
4574
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Chart 67

46 47 48

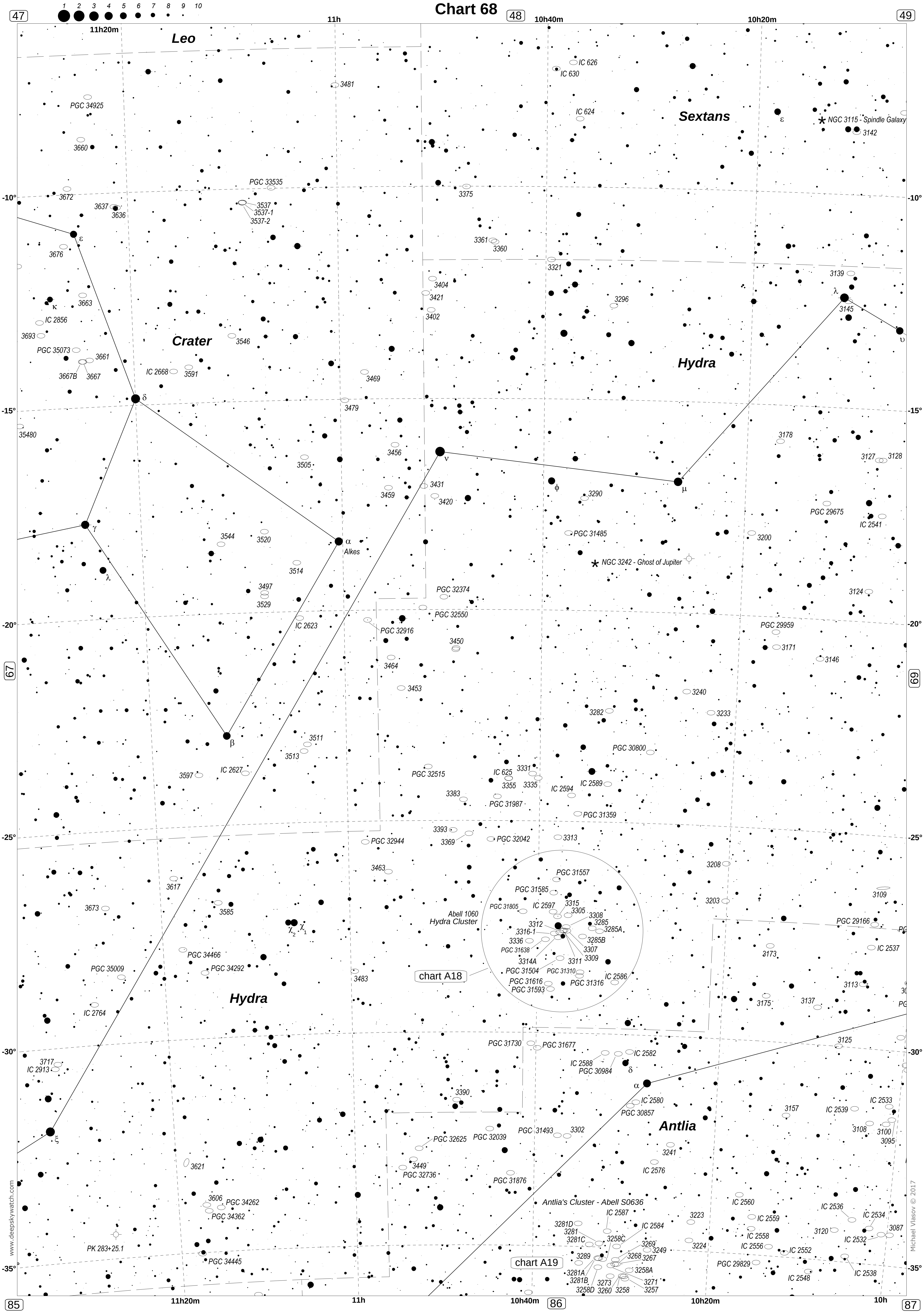
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66 68

Chart 68

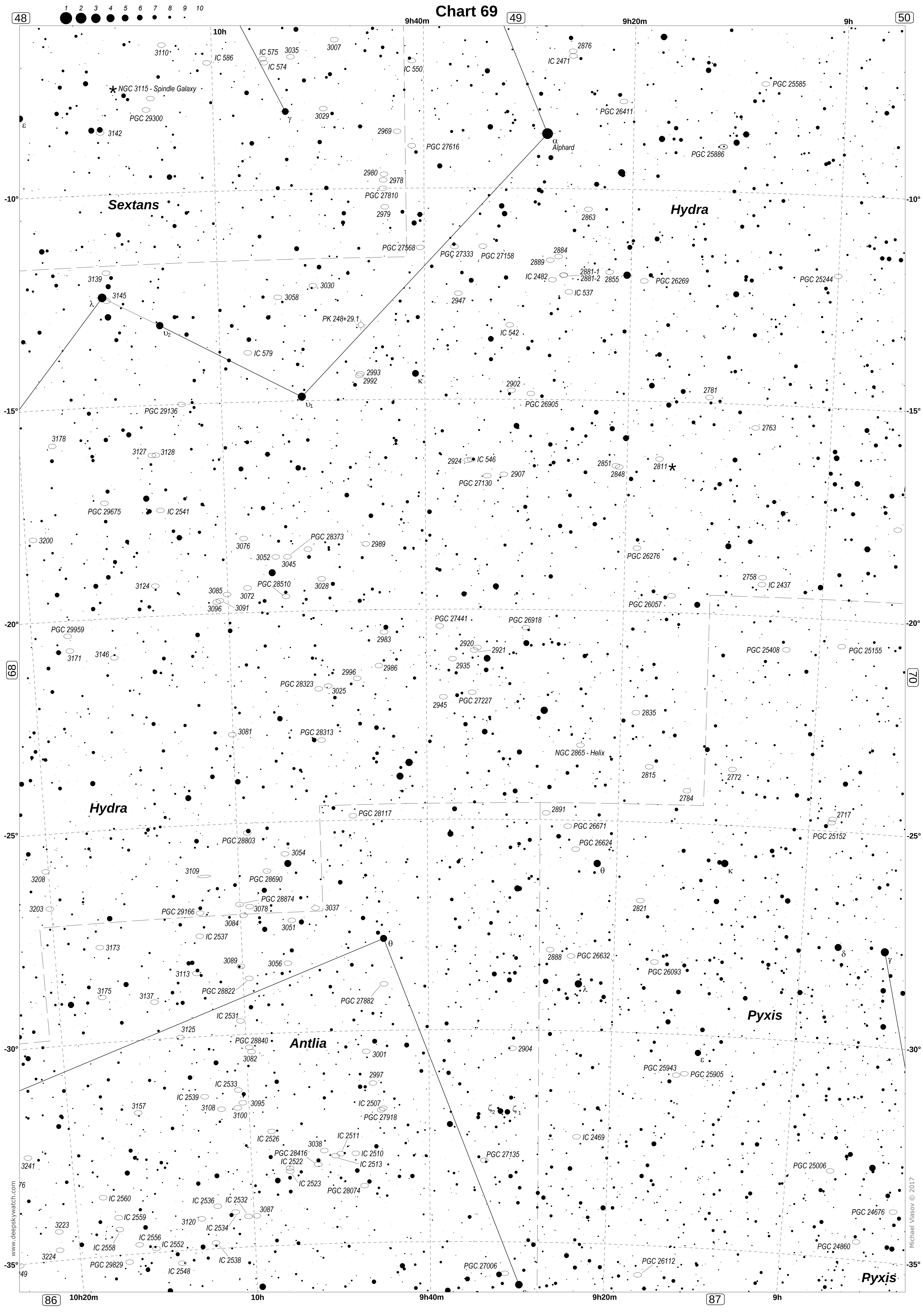
47 48 49



67 69

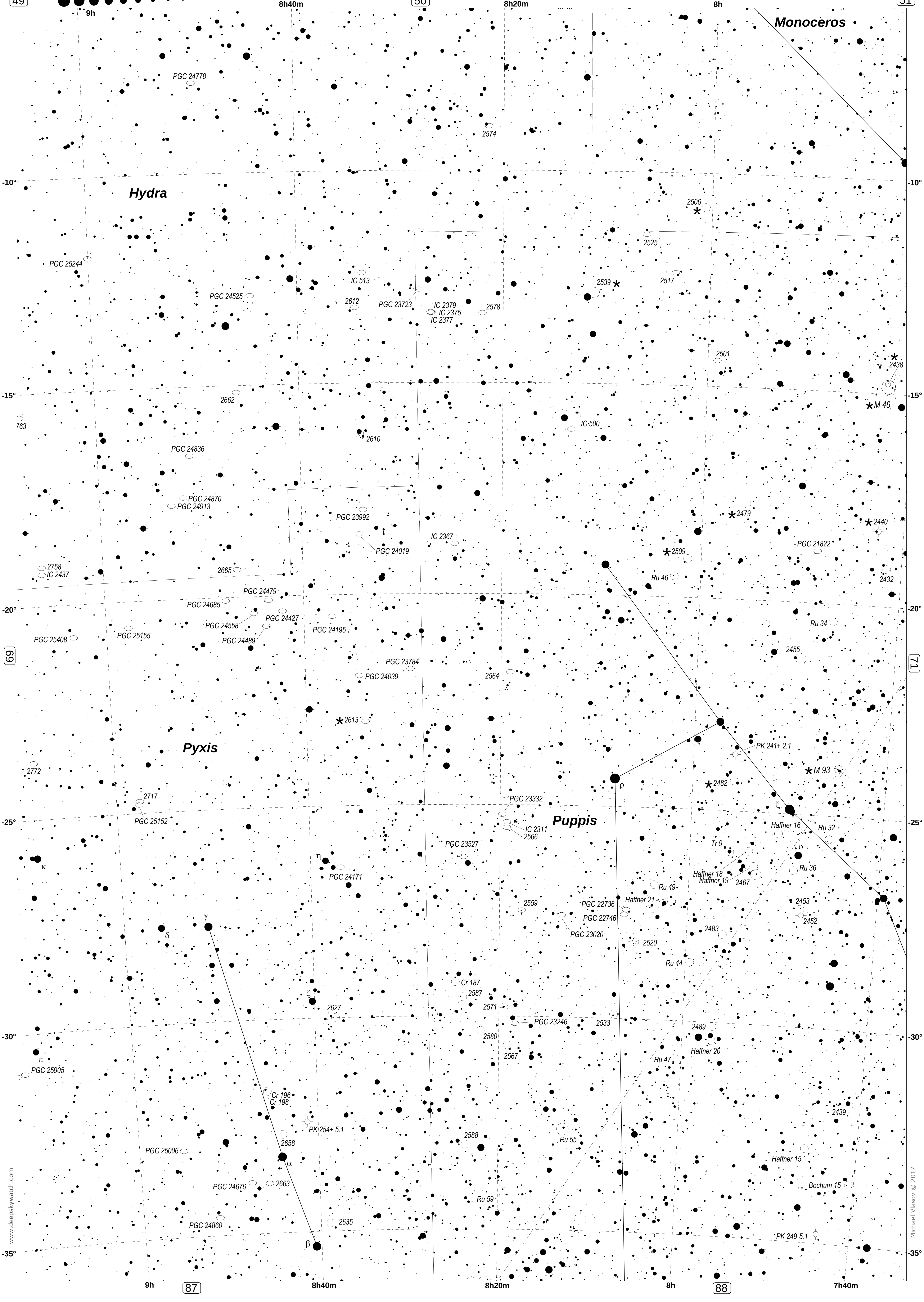
85 86 87

Chart 69



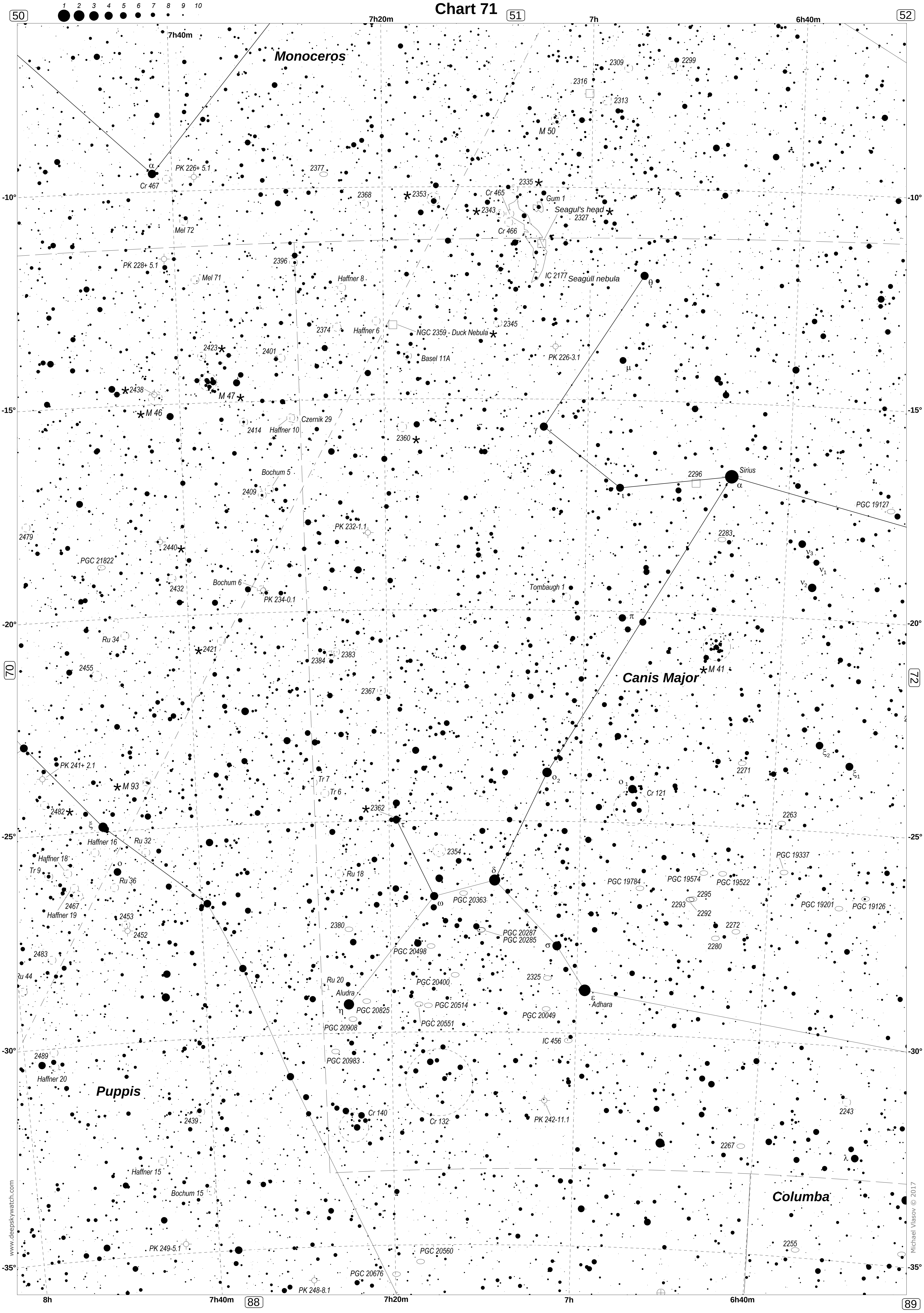
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48
49
50
68
70
86
87
10h
9h40m
9h20m
9h
10h20m
-10°
-15°
-20°
-25°
-30°
-35°
Sextans
Hydra
Antlia
Pyxis
NGC 3115 - Spindle Galaxy
NGC 2865 - Helix
Alphard
PK 248+29.1
3110
IC 586
IC 575
IC 574
3035
3007
IC 550
2876
IC 2471
PGC 25585
PGC 29300
3142
3029
2969
PGC 27616
PGC 26411
PGC 25886
2980
2978
PGC 27810
2979
2863
PGC 27568
PGC 27333
PGC 27158
2884
2889
2881-1
2881-2
IC 2482
2855
PGC 26269
PGC 25244
3139
3145
3030
3058
2947
IC 537
IC 542
IC 579
2993
2992
2902
PGC 26905
2781
PGC 29136
2763
3178
3127
3128
2924
IC 546
2907
PGC 27130
2851
2848
2811
PGC 29675
IC 2541
3200
3076
PGC 28373
2989
3052
3045
PGC 26276
PGC 28510
3028
3124
3085
3072
3096
3091
2758
IC 2437
PGC 26057
PGC 29959
PGC 27441
PGC 26918
2983
3171
3146
2920
2921
2935
2986
2996
PGC 25408
PGC 25155
PGC 28323
3025
2945
PGC 27227
2835
3081
PGC 28313
2815
2772
2784
PGC 28117
2891
PGC 26671
PGC 26624
2717
PGC 25152
PGC 28803
3054
3109
PGC 28690
3208
3203
PGC 28874
3078
PGC 29166
3037
3084
3051
2821
IC 2537
3173
3089
3056
2888
PGC 26632
PGC 26093
3113
PGC 28822
PGC 27882
3175
3137
IC 2531
3125
PGC 28840
3082
3001
2904
PGC 25943
PGC 25905
2997
IC 2533
IC 2539
3108
3095
3100
IC 2507
PGC 27918
3157
IC 2526
IC 2469
3038
IC 2511
IC 2510
IC 2513
PGC 28416
IC 2522
IC 2523
PGC 27135
PGC 28074
3241
PGC 25006
IC 2560
IC 2536
IC 2532
3087
IC 2559
3120
IC 2534
PGC 24676
3223
IC 2558
IC 2556
IC 2552
IC 2538
3224
PGC 29829
IC 2548
PGC 27006
PGC 26112
PGC 24860
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Chart 70



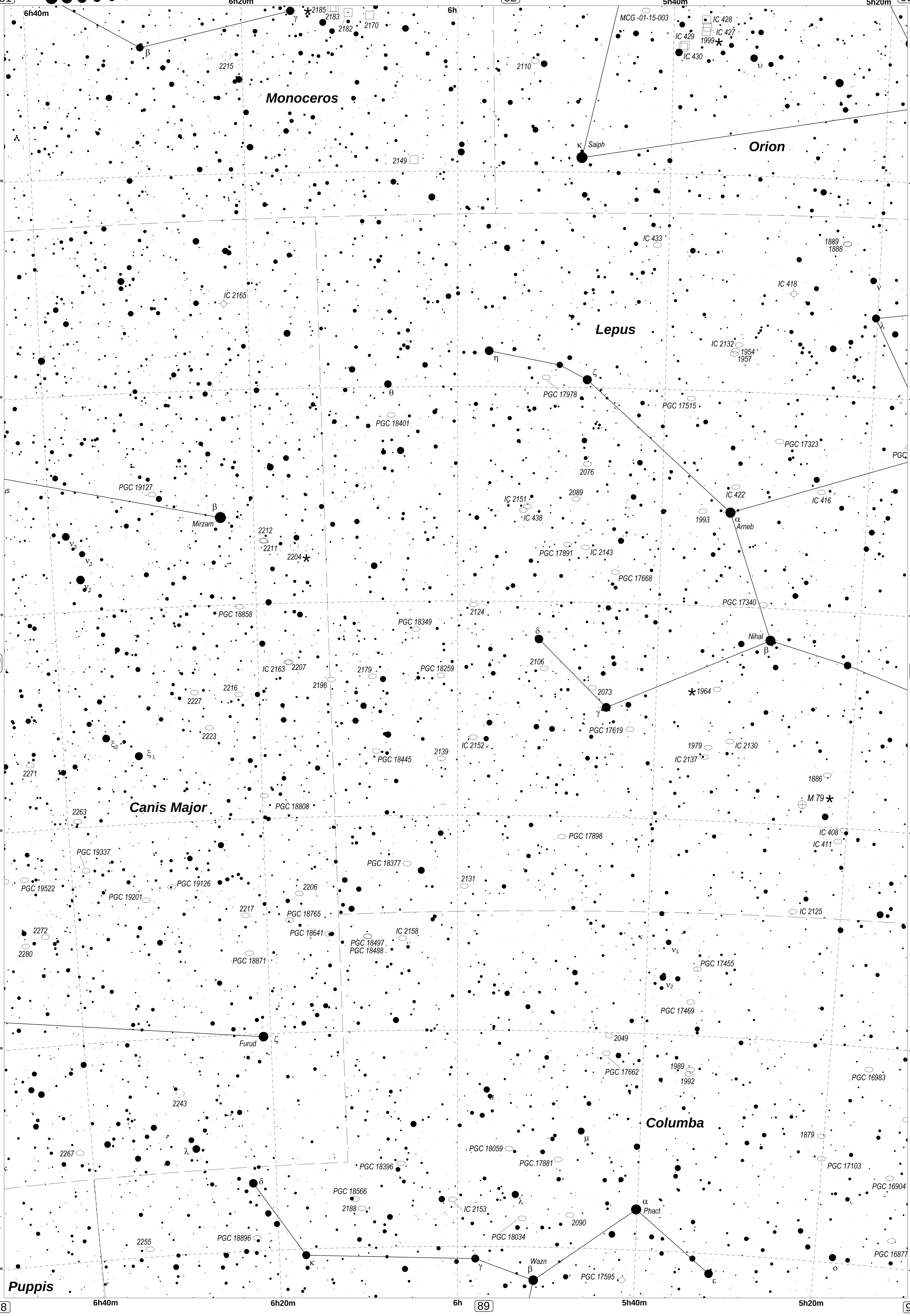
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Chart 71



50
51
52
70
72
88
89
1 2 3 4 5 6 7 8 9 10
7h20m
7h
6h40m
7h40m
8h
-10°
-15°
-20°
-25°
-30°
-35°
Monoceros
Canis Major
Puppis
Columba
Sirius
Adhara
Aludra
Seagul's head
Seagull nebula
IC 2177
Gum 1
Cr 465
Cr 466
2335
2353
2343
2327
2368
2377
Cr 467
PK 226+ 5.1
Mel 72
PK 228+ 5.1
Mel 71
2396
2309
2299
2316
2313
M 50
Haffner 8
Haffner 6
2374
NGC 2359 - Duck Nebula
2345
PK 226-3.1
Basel 11A
2423
2401
2438
M 47
M 46
2414
Haffner 10
Czernik 29
2360
Bochum 5
2409
2296
PGC 19127
PK 232-1.1
2283
2479
2440
PGC 21822
2432
Bochum 6
PK 234-0.1
Tombaugh 1
Ru 34
2421
2383
2384
M 41
2455
2367
PK 241+ 2.1
M 93
Tr 7
Tr 6
2271
Cr 121
2482
2362
Haffner 16
Ru 32
2354
2263
PGC 19337
Haffner 18
Tr 9
Ru 36
Ru 18
PGC 19784
PGC 19574
PGC 19522
2295
2293
2292
PGC 20363
PGC 19201
PGC 19126
2467
Haffner 19
2453
2452
2380
PGC 20287
PGC 20285
2272
2280
PGC 20498
2483
Ru 44
Ru 20
PGC 20400
2325
PGC 20825
PGC 20514
PGC 20551
PGC 20049
PGC 20908
IC 456
2489
Haffner 20
PGC 20983
Cr 132
Cr 140
PK 242-11.1
2243
2439
2267
Haffner 15
Bochum 15
PK 249-5.1
PGC 20560
2255
PGC 20676
PK 248-8.1
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Chart 72



51 52 53 71 73 88 89 90

Chart 73

1 2 3 4 5 6 7 8 9 10

52 53 54

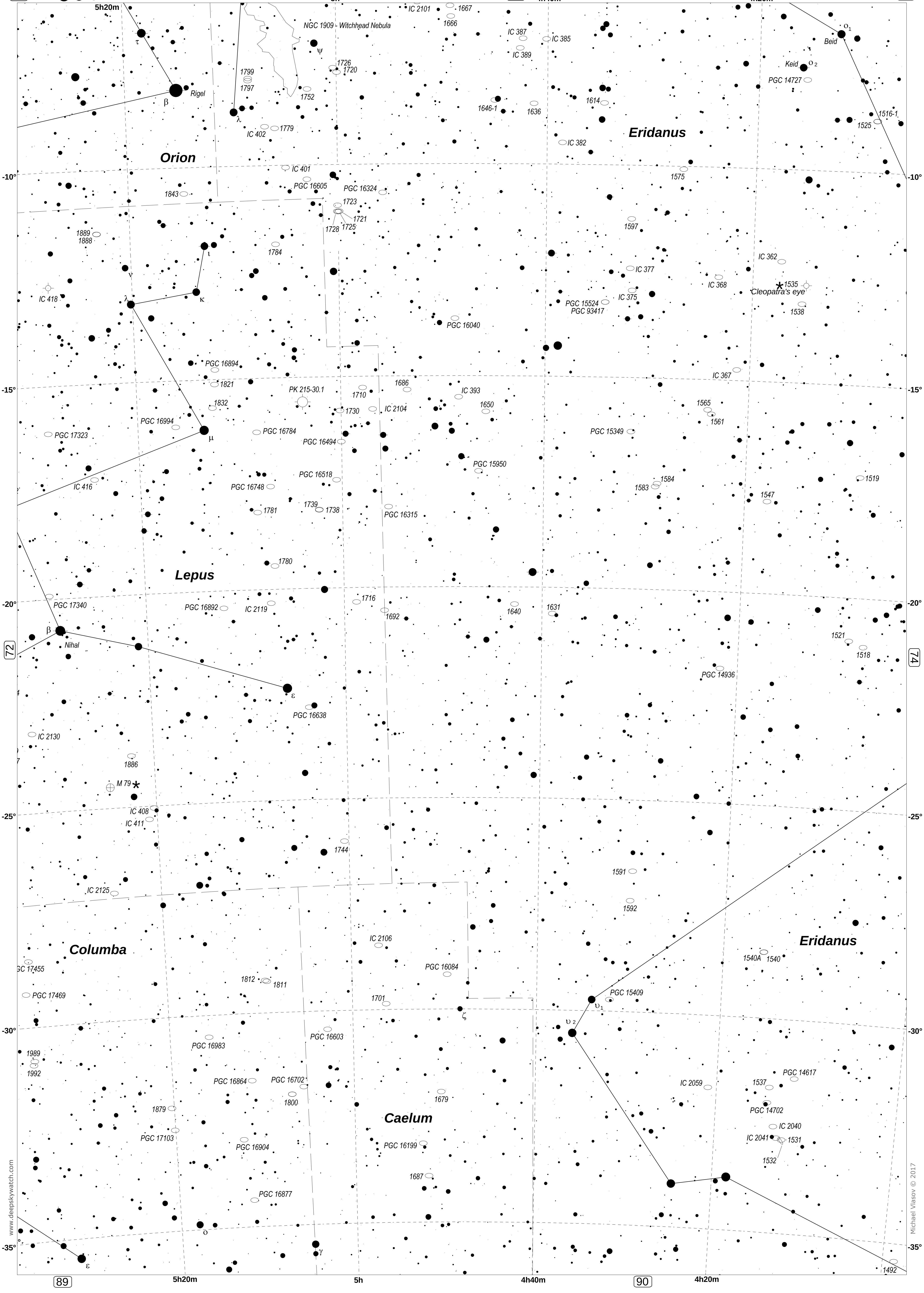
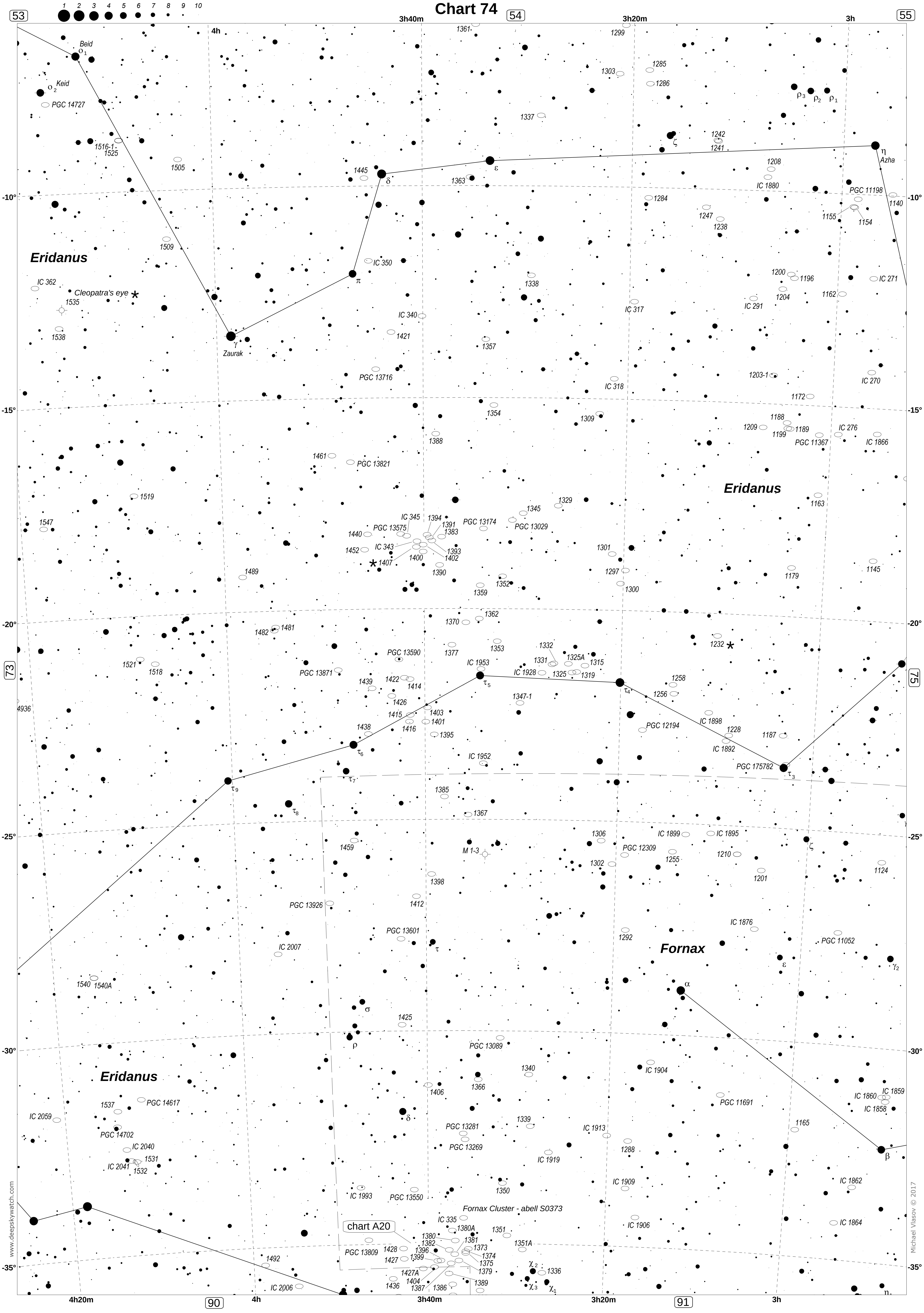


Chart 74

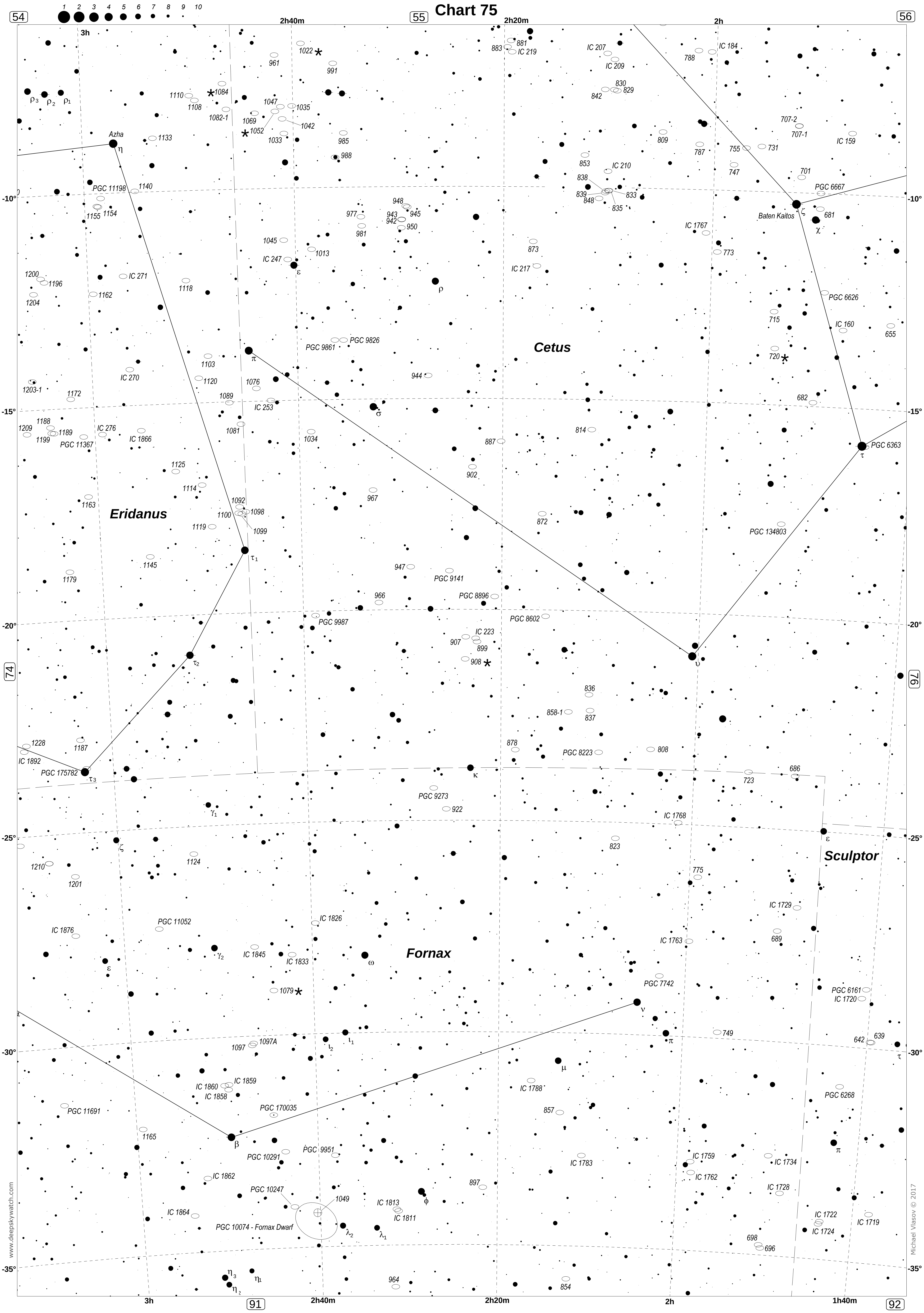


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Chart 75

54 55 56



74 76 91 92

Chart 76

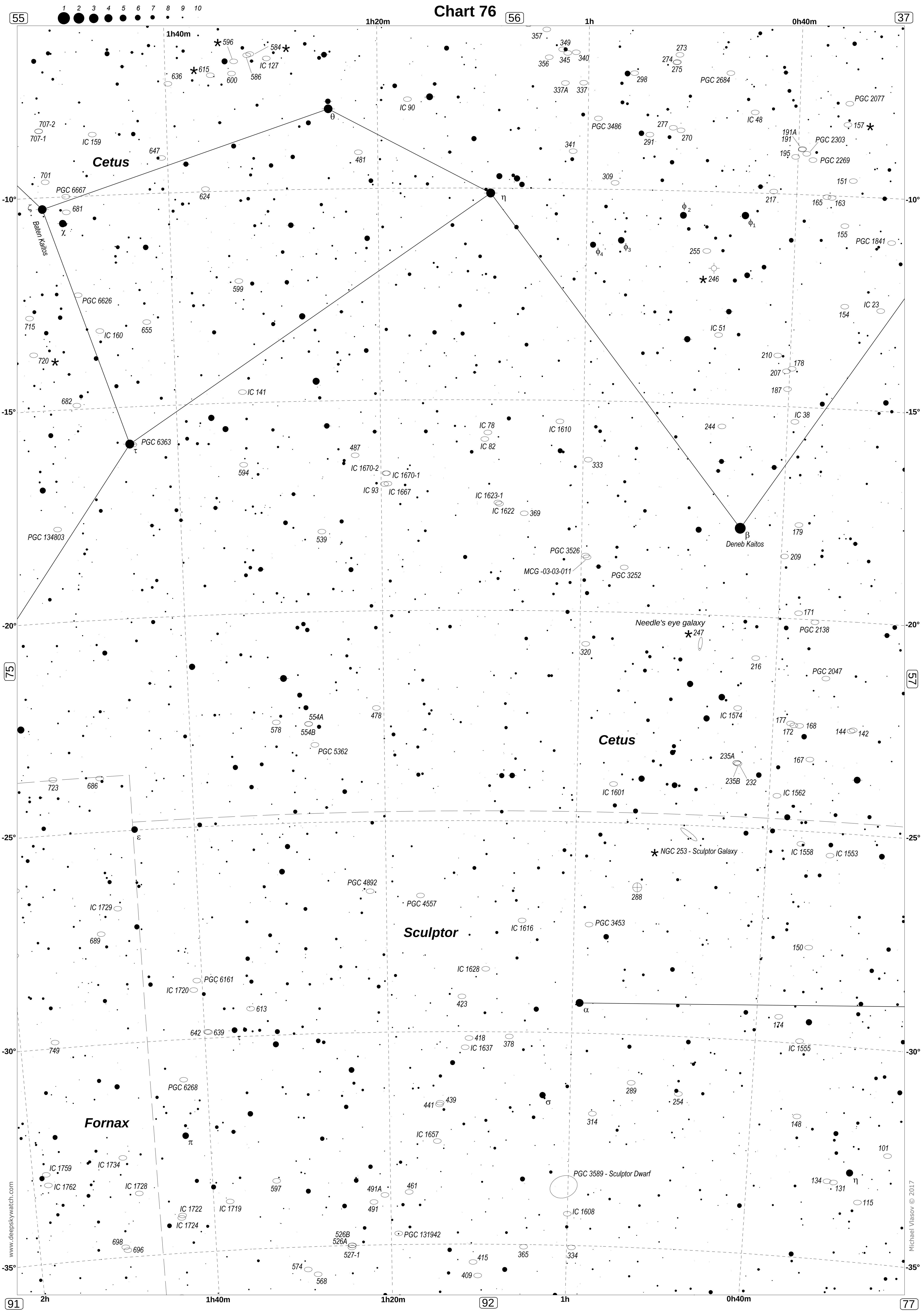
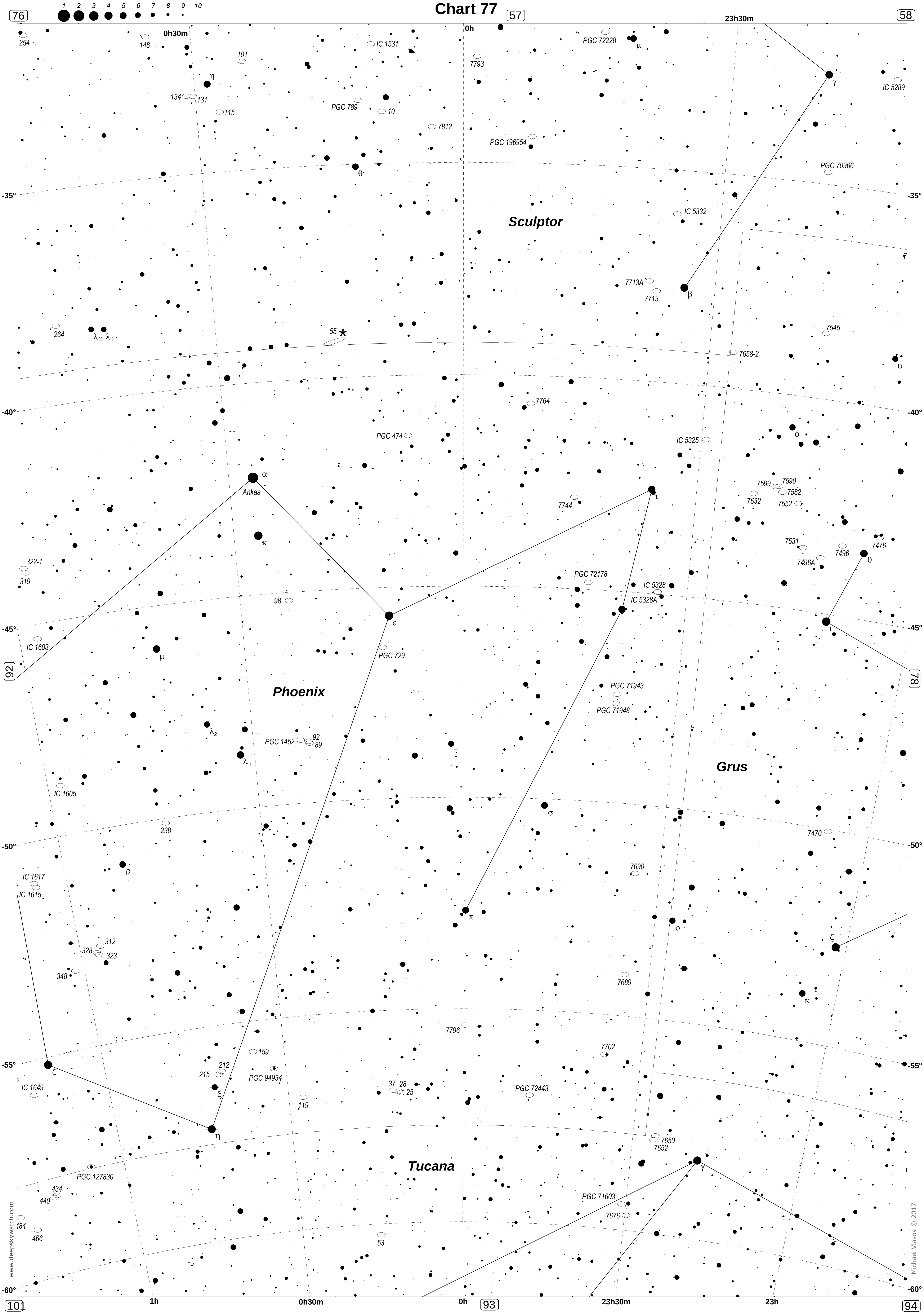

55
56
37
75
57
91
92
77
1 2 3 4 5 6 7 8 9 10
1h40m
1h20m
1h
0h40m
2h
-10°
-15°
-20°
-25°
-30°
-35°
Cetus
Sculptor
Fornax
Baten Kaitos
Deneb Kaitos
Needle's eye galaxy
NGC 253 - Sculptor Galaxy
PGC 3589 - Sculptor Dwarf
MCG -03-03-011
PGC 3526
PGC 3252
PGC 6363
PGC 6626
PGC 6667
PGC 134803
PGC 5362
PGC 4892
PGC 4557
PGC 3453
PGC 6161
PGC 6268
PGC 131942
PGC 2684
PGC 3486
PGC 2077
PGC 2303
PGC 2269
PGC 1841
PGC 2138
PGC 2047
IC 127
IC 159
IC 160
IC 141
IC 90
IC 48
IC 23
IC 51
IC 38
IC 78
IC 82
IC 1610
IC 1670-2
IC 1670-1
IC 93
IC 1667
IC 1623-1
IC 1622
IC 1574
IC 1601
IC 1562
IC 1558
IC 1553
IC 1616
IC 1628
IC 1637
IC 1555
IC 1657
IC 1608
IC 1729
IC 1720
IC 1759
IC 1762
IC 1734
IC 1728
IC 1722
IC 1724
IC 1719
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Chart 77



76
57
58
1 2 3 4 5 6 7 8 9 10
0h30m
0h
23h30m
Sculptor
Phoenix
Grus
Tucana
Ankaa
-35°
-40°
-45°
-50°
-55°
-60°
92
78
101
93
94
1h
23h
PGC 72228
IC 1531
IC 5289
PGC 789
PGC 196954
PGC 70966
IC 5332
7713A
7713
7545
7658-2
7764
PGC 474
IC 5325
7744
7599
7590
7582
7552
7632
7531
7496
7476
7496A
PGC 72178
IC 5328
IC 5328A
IC 1603
PGC 729
PGC 71943
PGC 71948
PGC 1452
IC 1605
7470
7690
IC 1617
IC 1615
7689
7796
7702
PGC 94934
PGC 72443
IC 1649
7650
7652
PGC 127830
PGC 71603
7676
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Chart 78

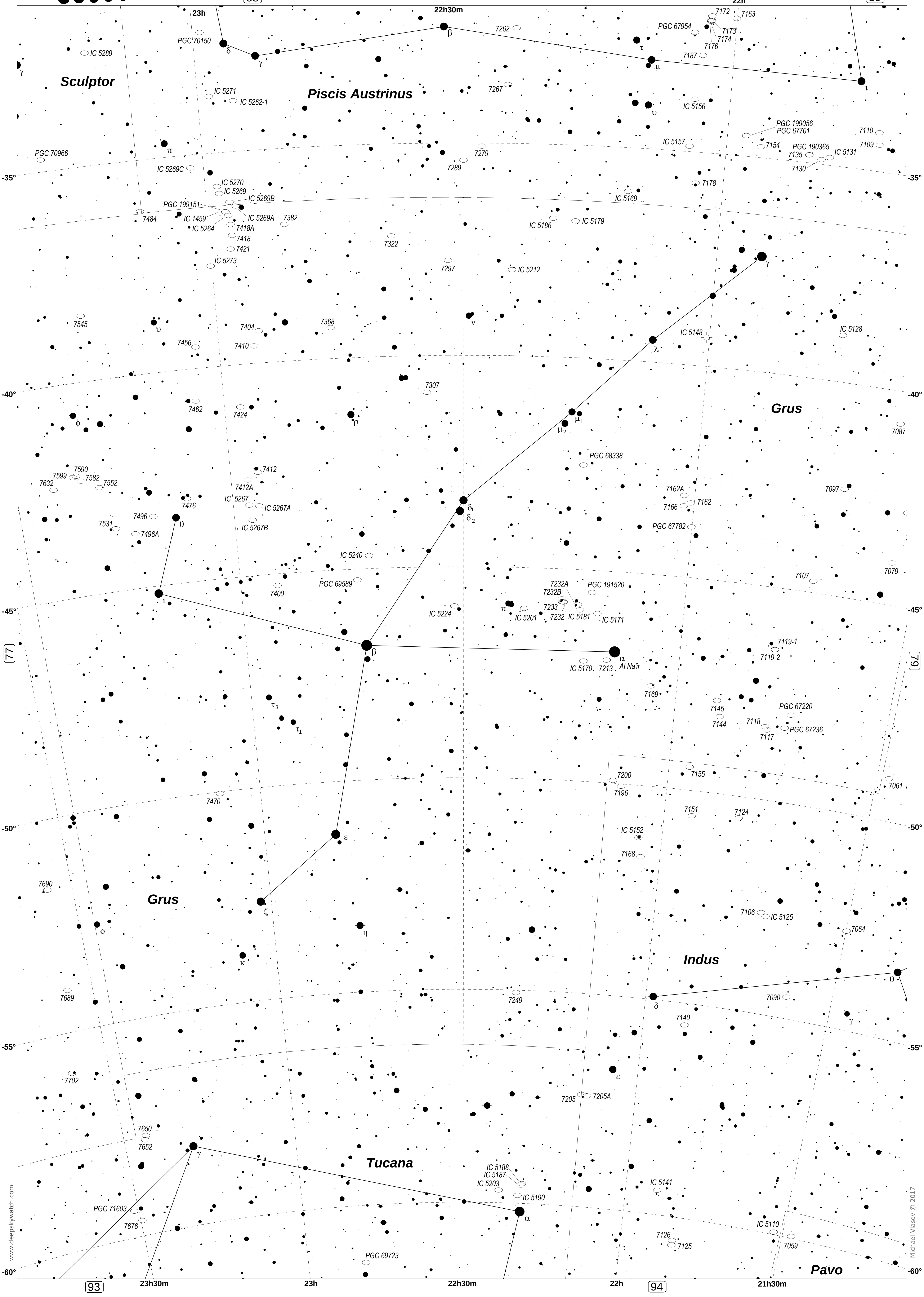
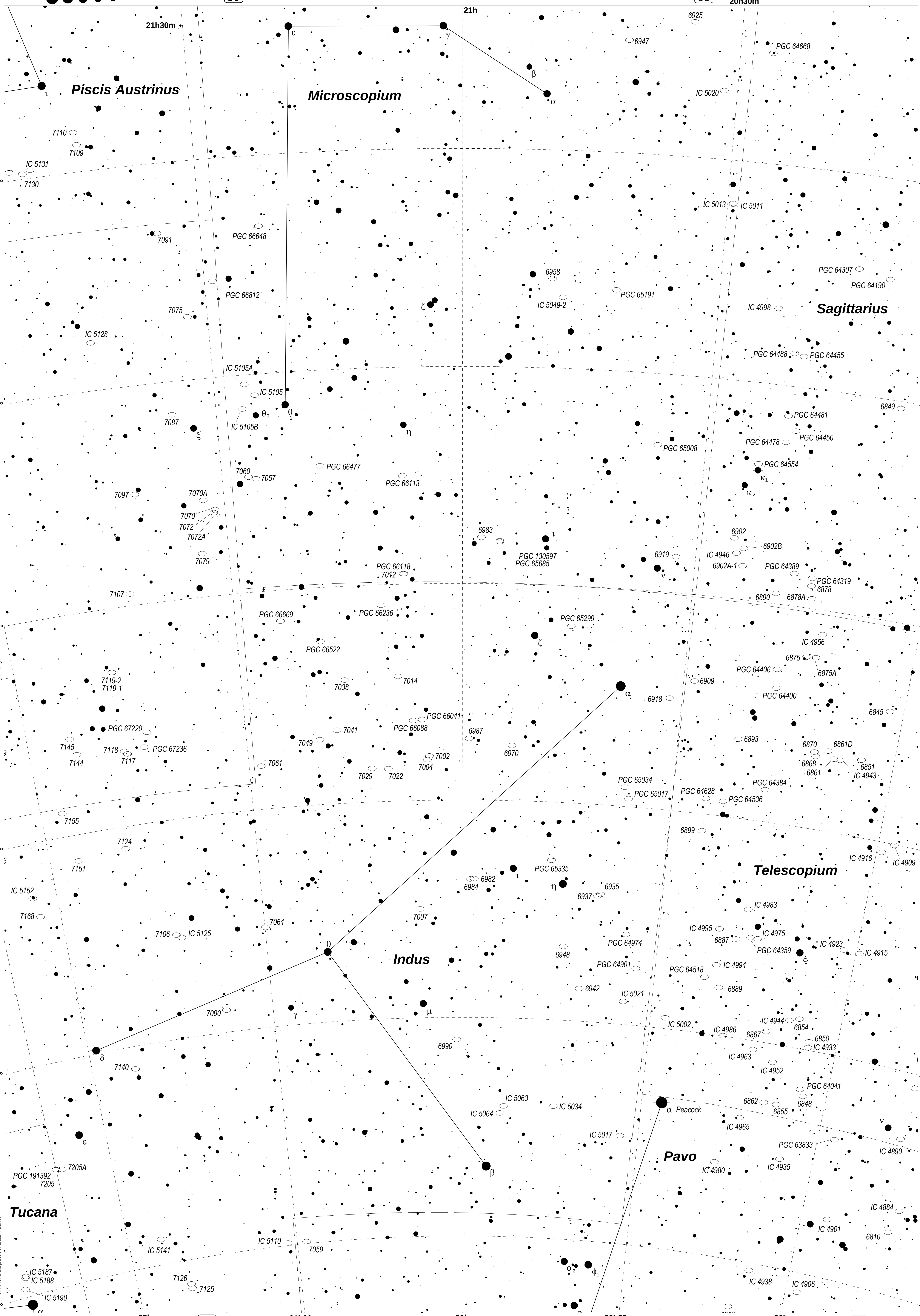

1 2 3 4 5 6 7 8 9 10
58
59
77
79
93
94
23h
22h30m
22h
23h30m
21h30m
-35°
-40°
-45°
-50°
-55°
-60°
Sculptor
Piscis Austrinus
Grus
Indus
Tucana
Pavo
Al Na'ir
PGC 70150
IC 5289
IC 5271
IC 5262-1
PGC 70966
IC 5269C
IC 5270
IC 5269
IC 5269B
PGC 199151
IC 1459
IC 5264
IC 5269A
7484
7418A
7418
7421
7382
IC 5273
7262
7267
7279
7289
7322
7297
IC 5212
PGC 67954
7172
7163
7173
7174
7176
7187
IC 5156
PGC 199056
PGC 67701
7154
IC 5157
PGC 190365
7135
7130
IC 5131
7110
7109
7178
IC 5169
IC 5186
IC 5179
7545
7404
7368
7456
7410
IC 5148
IC 5128
7307
7462
7424
7087
PGC 68338
7590
7599
7582
7552
7632
7412
7412A
IC 5267
IC 5267A
IC 5267B
7476
7496
7531
7496A
7162A
7166
7162
7097
PGC 67782
IC 5240
PGC 69589
7400
7232A
7232B
PGC 191520
7233
7232
IC 5201
IC 5181
IC 5171
IC 5224
7107
7079
IC 5170.
7213
7119-1
7119-2
7169
7145
7144
7118
7117
PGC 67220
PGC 67236
7200
7196
7155
7061
7470
7151
7124
IC 5152
7168
7690
7106
IC 5125
7064
7689
7249
7090
7140
7702
7205
7205A
7650
7652
IC 5188
IC 5187
IC 5203
IC 5190
IC 5141
PGC 71603
7676
IC 5110
7126
7125
7059
PGC 69723
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Chart 79



1 2 3 4 5 6 7 8 9 10
59
60
21h30m
21h
20h30m
Piscis Austrinus
Microscopium
Sagittarius
Indus
Telescopium
Pavo
Tucana
α Peacock
-35°
-40°
-45°
-50°
-55°
-60°
78
80
94
95
22h
20h
6925
6947
PGC 64668
IC 5020
7110
7109
IC 5131
7130
IC 5013
IC 5011
PGC 66648
7091
6958
IC 5049-2
PGC 65191
PGC 64307
PGC 64190
IC 4998
PGC 66812
7075
IC 5128
PGC 64488
PGC 64455
IC 5105A
IC 5105
IC 5105B
7087
6849
PGC 64481
PGC 64478
PGC 64450
PGC 65008
PGC 64554
PGC 66477
7060
7057
PGC 66113
7097
7070A
7070
7072
7072A
7079
6983
PGC 130597
PGC 65685
6902
6902B
IC 4946
6919
6902A-1
PGC 64389
PGC 64319
6878
6890
6878A
PGC 66118
7012
7107
PGC 66669
PGC 66236
PGC 65299
IC 4956
PGC 66522
6875
6875A
7119-2
7119-1
7038
7014
PGC 64406
6909
6918
PGC 64400
6845
PGC 67220
PGC 66041
PGC 66088
7041
6987
7145
7118
7117
PGC 67236
7144
7049
7002
7004
6970
6893
6870
6861D
6868
6861
6851
IC 4943
7061
7029
7022
PGC 65034
PGC 65017
PGC 64628
PGC 64384
PGC 64536
7155
6899
7124
7151
PGC 65335
IC 4916
IC 4909
IC 5152
6984
6982
6935
6937
7168
7007
IC 4983
7106
IC 5125
7064
IC 4995
IC 4975
6887
PGC 64359
IC 4923
IC 4915
PGC 64974
6948
PGC 64901
PGC 64518
IC 4994
6889
6942
IC 5021
7090
IC 5002
IC 4986
IC 4944
6854
6867
6850
IC 4933
6990
IC 4963
7140
IC 4952
PGC 64041
IC 5063
IC 5064
IC 5034
6862
6855
6848
IC 4965
IC 5017
PGC 63833
IC 4890
7205A
PGC 191392
7205
IC 4980
IC 4935
IC 4884
IC 4901
6810
IC 5141
IC 5110
7059
IC 5187
IC 5188
7126
7125
IC 4938
IC 4906
IC 5190
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Chart 80

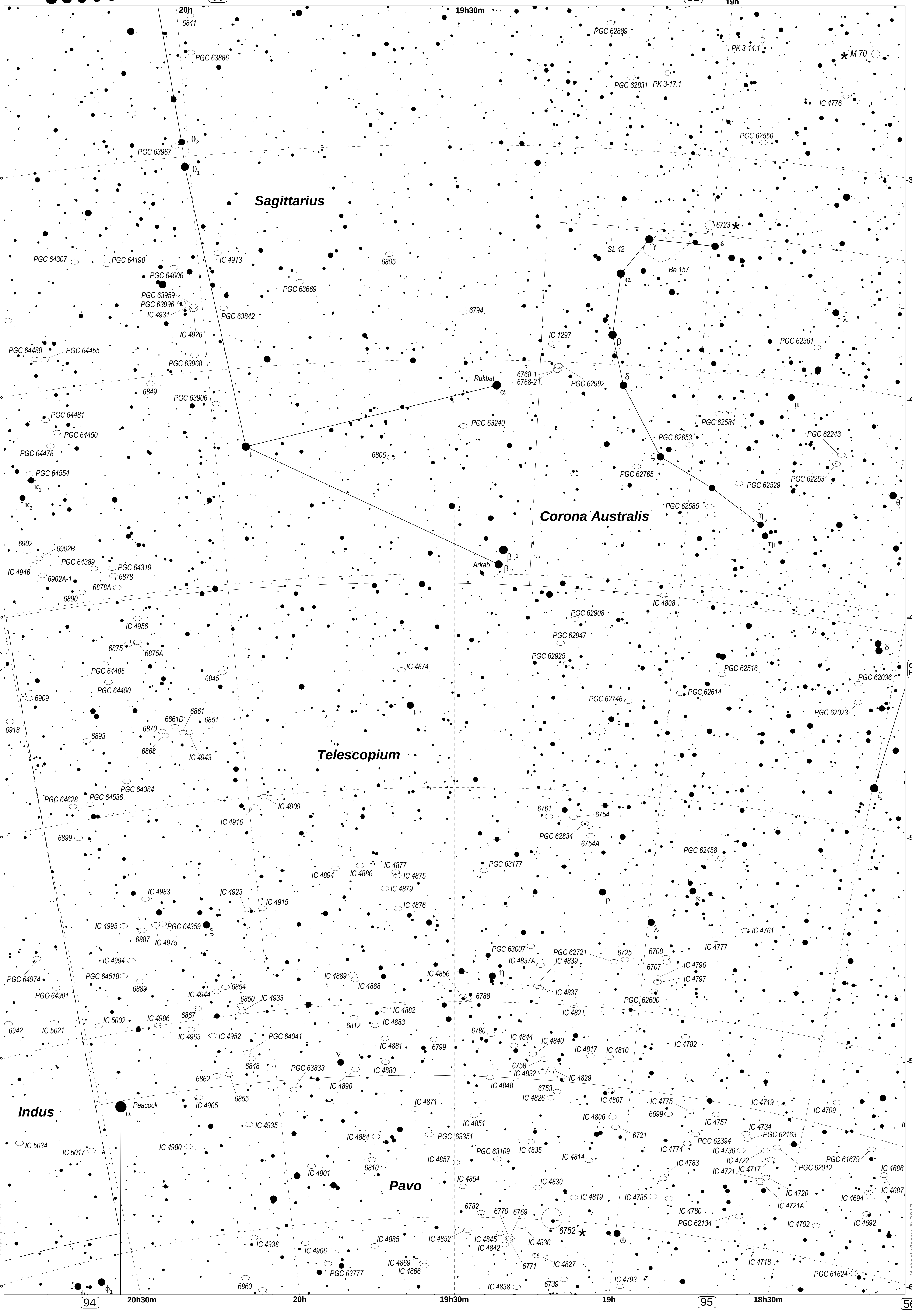
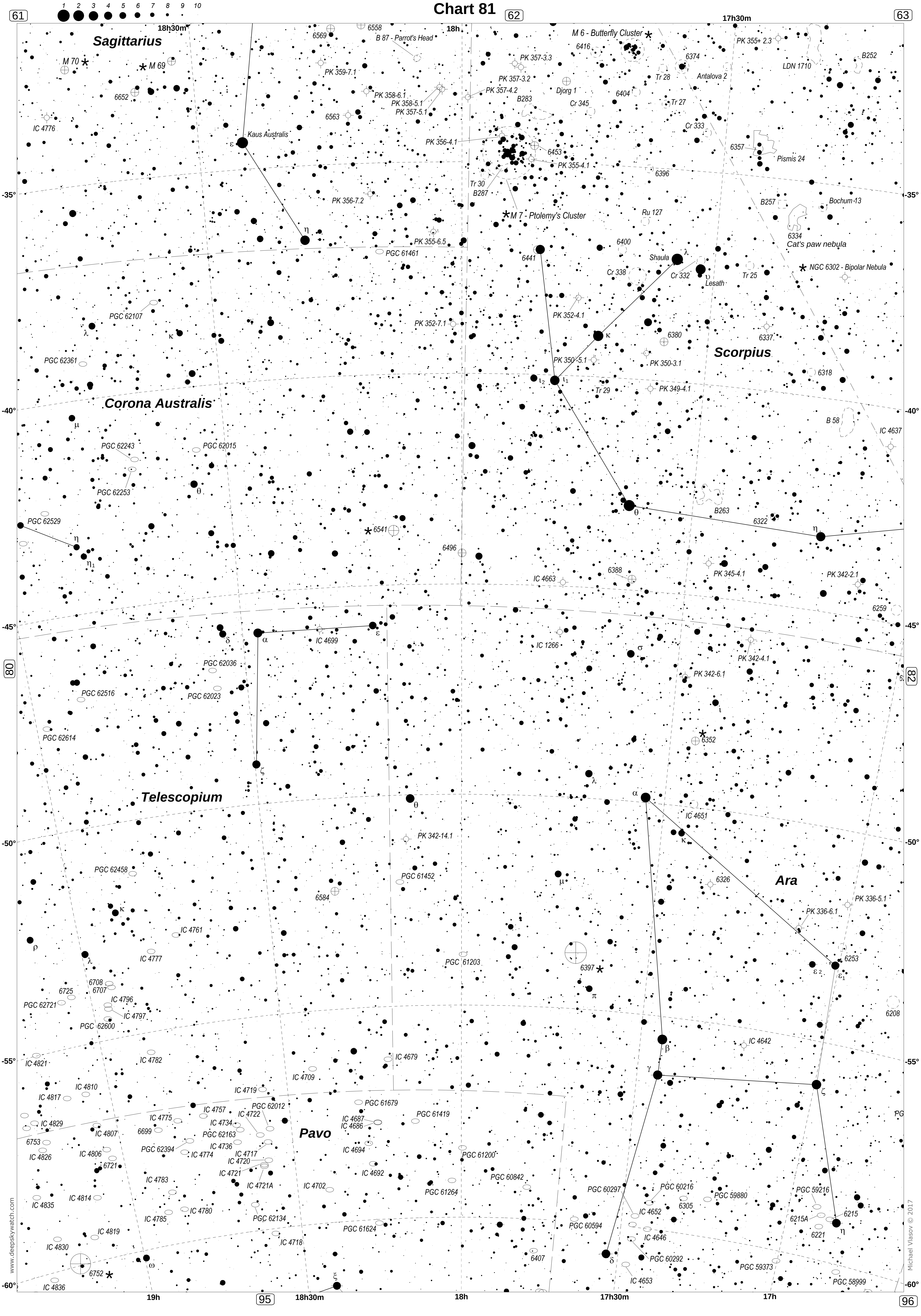
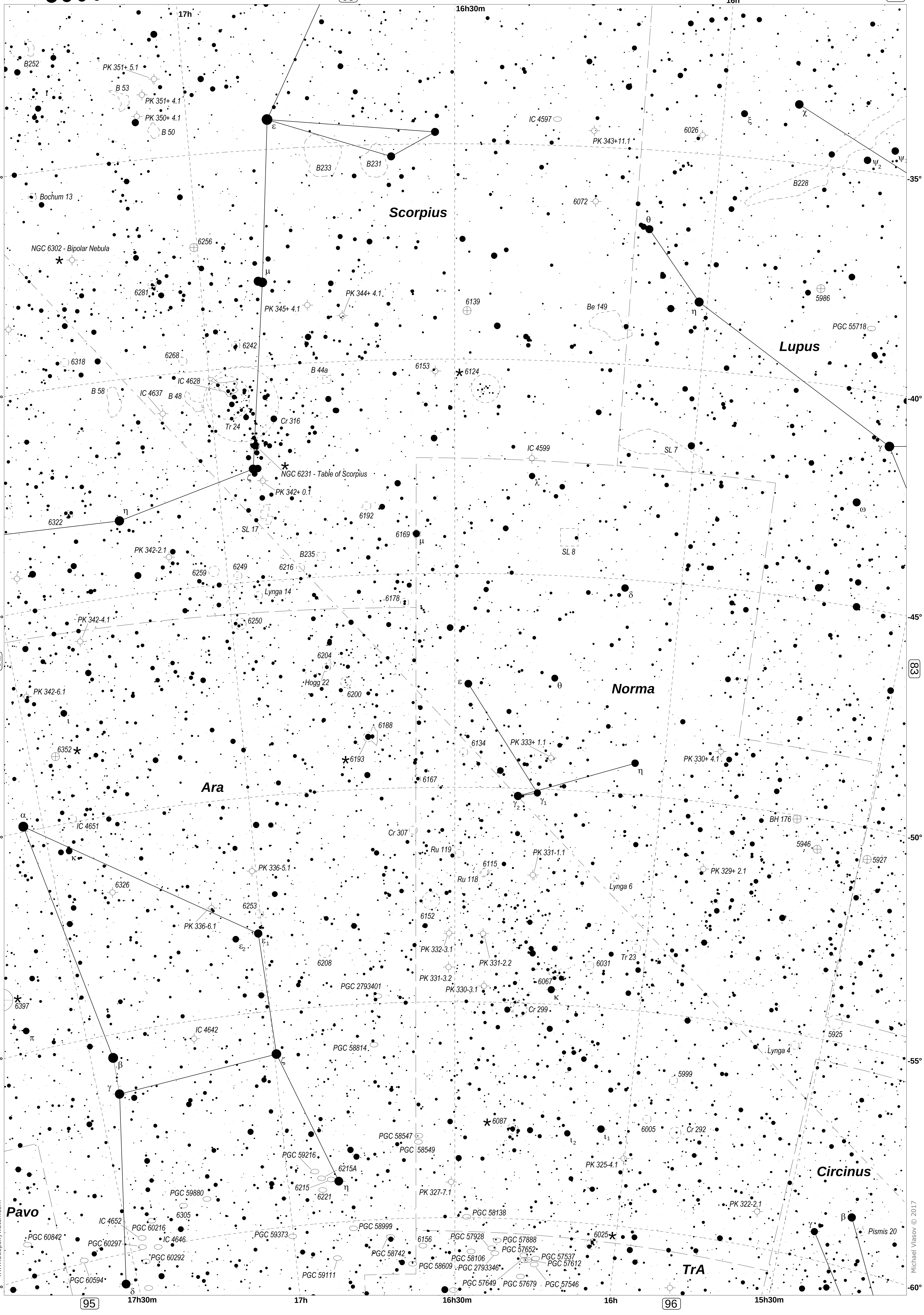

1 2 3 4 5 6 7 8 9 10
60
61
20h
19h30m
19h
20h30m
18h30m
-35°
-40°
-45°
-50°
-55°
-60°
79
81
94
95
56
Sagittarius
Corona Australis
Telescopium
Indus
Pavo
Rukbat
Arkab
Peacock
M 70
6723
SL 42
Be 157
PK 3-14.1
PK 3-17.1
IC 4776
IC 1297
6841
PGC 63886
PGC 62889
PGC 62831
PGC 62550
PGC 63967
PGC 64307
PGC 64190
IC 4913
6805
PGC 64006
PGC 63959
PGC 63996
IC 4931
IC 4926
PGC 63669
PGC 63842
6794
PGC 62361
PGC 64488
PGC 64455
PGC 63968
6768-1
6768-2
PGC 62992
6849
PGC 63906
PGC 63240
PGC 64481
PGC 64450
PGC 64478
PGC 64554
6806
PGC 62584
PGC 62653
PGC 62243
PGC 62253
PGC 62765
PGC 62529
PGC 62585
6902
6902B
PGC 64389
PGC 64319
IC 4946
6902A-1
6878
6878A
6890
IC 4808
PGC 62908
IC 4956
PGC 62947
6875
6875A
PGC 62925
IC 4874
PGC 64406
6845
PGC 62516
PGC 62036
PGC 64400
PGC 62614
6909
PGC 62746
PGC 62023
6918
6861
6861D
6851
6870
6893
6868
IC 4943
PGC 64384
PGC 64628
PGC 64536
IC 4909
IC 4916
6761
6754
6899
PGC 62834
6754A
PGC 62458
IC 4877
IC 4894
IC 4886
IC 4875
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IC 4879
IC 4923
IC 4915
IC 4876
IC 4995
PGC 64359
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IC 4975
IC 4761
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PGC 63007
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IC 4994
IC 4837A
IC 4839
6707
IC 4796
PGC 64974
PGC 64518
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IC 4797
6889
IC 4888
IC 4856
IC 4837
PGC 64901
6854
IC 4944
6850
IC 4933
6788
PGC 62600
6867
IC 4882
IC 4821
IC 5002
IC 4986
IC 4883
6942
IC 5021
6812
IC 4963
IC 4952
6780
IC 4844
IC 4840
PGC 64041
IC 4881
6799
IC 4817
IC 4810
IC 4782
6848
PGC 63833
IC 4880
6758
IC 4832
6862
IC 4890
IC 4829
IC 4848
6753
6855
IC 4826
IC 4807
IC 4965
IC 4871
IC 4775
IC 4719
IC 4709
IC 4806
6699
IC 4851
IC 4757
IC 4935
IC 4734
IC 4884
PGC 63351
6721
PGC 62394
PGC 62163
IC 5034
IC 4980
IC 4835
IC 4774
IC 4736
IC 5017
PGC 63109
IC 4814
IC 4722
PGC 62012
PGC 61679
IC 4857
IC 4783
IC 4717
IC 4686
6810
IC 4721
IC 4901
IC 4854
IC 4830
IC 4720
IC 4687
IC 4819
IC 4785
IC 4721A
IC 4694
6782
6770
6769
IC 4780
PGC 62134
IC 4702
IC 4692
6752
IC 4938
IC 4885
IC 4852
IC 4845
IC 4836
IC 4842
IC 4906
IC 4718
IC 4869
IC 4866
6771
IC 4827
PGC 63777
PGC 61624
6860
IC 4838
6739
IC 4793
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Chart 81



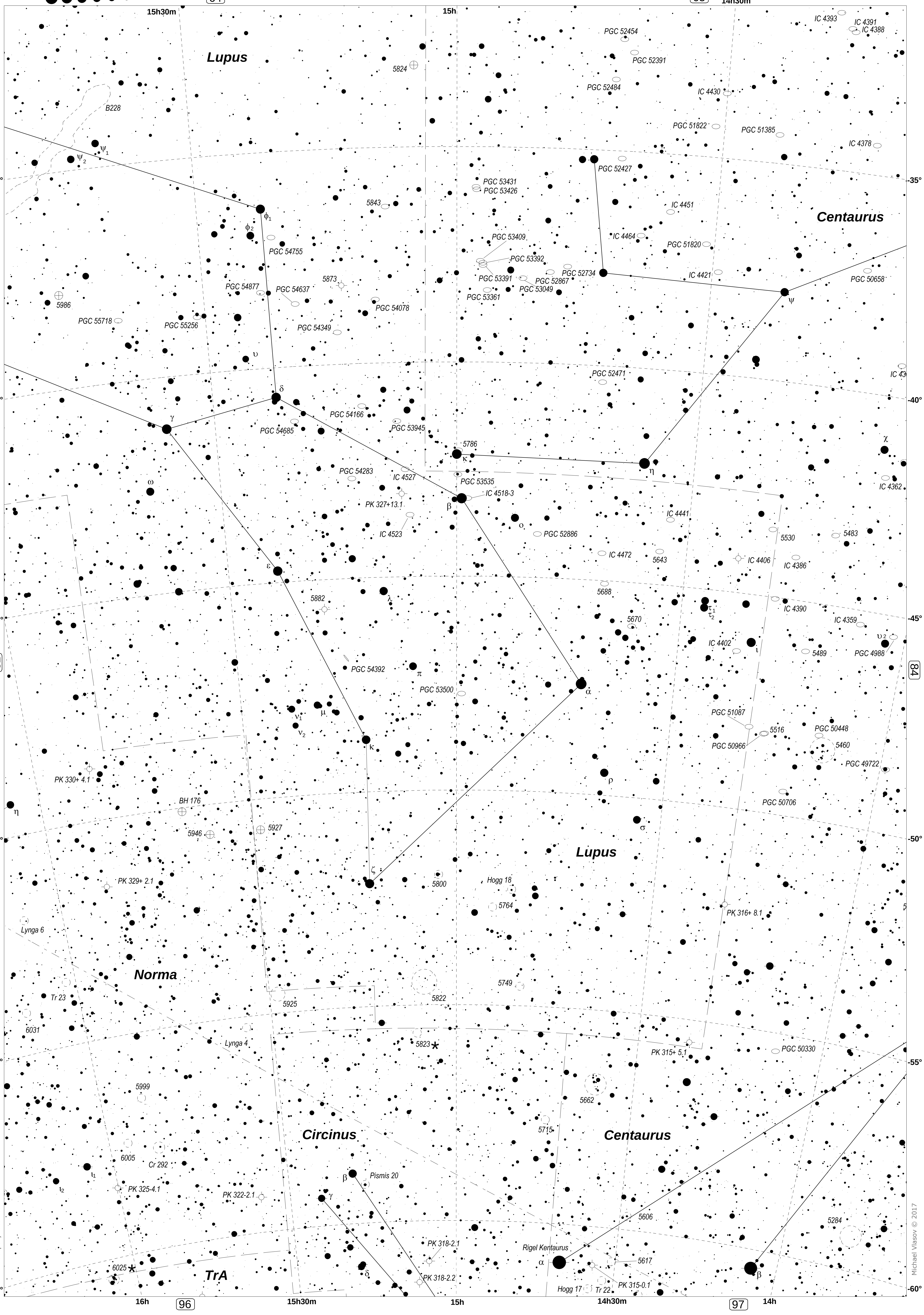
61
62
63
1 2 3 4 5 6 7 8 9 10
18h30m
18h
17h30m
17h
19h
Sagittarius
Corona Australis
Scorpius
Telescopium
Ara
Pavo
M 70
M 69
6652
IC 4776
6569
6558
B 87 - Parrot's Head
PK 359-7.1
PK 358-6.1
PK 358-5.1
PK 357-5.1
6563
PK 357-3.3
PK 357-3.2
PK 357-4.2
B283
Djorg 1
Cr 345
M 6 - Butterfly Cluster
6416
6374
Tr 28
Antalova 2
6404
Tr 27
Cr 333
PK 355+ 2.3
LDN 1710
B252
6357
Pismis 24
Kaus Australis
PK 356-4.1
6453
PK 355-4.1
6396
Tr 30
B287
PK 356-7.2
M 7 - Ptolemy's Cluster
Ru 127
B257
Bochum 13
6334
Cat's paw nebula
PK 355-6.5
PGC 61461
6441
6400
Shaula
Cr 338
Cr 332
Lesath
Tr 25
NGC 6302 - Bipolar Nebula
PGC 62107
PK 352-4.1
PK 352-7.1
6380
6337
PGC 62361
PK 350-5.1
PK 350-3.1
6318
Tr 29
PK 349-4.1
B 58
IC 4637
PGC 62243
PGC 62015
PGC 62253
PGC 62529
B263
6322
6541
6496
IC 4663
6388
PK 345-4.1
PK 342-2.1
6259
IC 4699
IC 1266
PK 342-4.1
PGC 62036
PGC 62023
PGC 62516
PK 342-6.1
PGC 62614
6352
IC 4651
PK 342-14.1
PGC 62458
PGC 61452
6584
6326
PK 336-5.1
PK 336-6.1
IC 4761
IC 4777
PGC 61203
6397
6253
6708
6725
6707
IC 4796
PGC 62721
IC 4797
PGC 62600
6208
IC 4642
IC 4821
IC 4782
IC 4679
IC 4709
IC 4810
IC 4719
IC 4817
IC 4757
PGC 62012
PGC 61679
IC 4829
IC 4775
IC 4734
IC 4722
IC 4687
PGC 61419
IC 4807
6699
PGC 62163
IC 4686
6753
PGC 62394
IC 4736
IC 4694
IC 4826
IC 4806
IC 4774
IC 4717
6721
IC 4720
PGC 61200
IC 4721
IC 4692
IC 4783
IC 4721A
IC 4702
PGC 60842
PGC 61264
PGC 60297
PGC 60216
IC 4814
PGC 59880
PGC 59216
IC 4835
IC 4785
IC 4780
PGC 62134
IC 4652
6305
6215
IC 4819
PGC 61624
PGC 60594
6215A
IC 4830
IC 4718
IC 4646
6221
6407
PGC 60292
6752
PGC 59373
IC 4653
PGC 58999
IC 4836
-35°
-40°
-45°
-50°
-55°
-60°
80
82
95
96
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Chart 82



1 2 3 4 5 6 7 8 9 10
63
64
17h
16h30m
16h
Scorpius
Lupus
Norma
Ara
Pavo
TrA
Circinus
B252
PK 351+ 5.1
B 53
PK 351+ 4.1
PK 350+ 4.1
B 50
B233
B231
IC 4597
PK 343+11.1
6026
B228
-35°
Bochum 13
6072
NGC 6302 - Bipolar Nebula
6256
6281
PK 345+ 4.1
PK 344+ 4.1
6139
Be 149
5986
PGC 55718
6318
6268
6242
B 44a
6153
6124
IC 4628
IC 4637
B 58
B 48
Tr 24
Cr 316
-40°
SL 7
IC 4599
NGC 6231 - Table of Scorpius
PK 342+ 0.1
6322
SL 17
6192
6169
SL 8
PK 342-2.1
B235
6259
6249
6216
Lyngа 14
6178
-45°
PK 342-4.1
6250
6204
Hogg 22
6200
81
83
PK 342-6.1
6188
6352
6193
6134
PK 333+ 1.1
PK 330+ 4.1
6167
IC 4651
Cr 307
BH 176
-50°
Ru 119
PK 331-1.1
5946
5927
PK 336-5.1
6115
PK 329+ 2.1
6326
Ru 118
Lynga 6
6253
6152
PK 336-6.1
PK 332-3.1
PK 331-2.2
6208
6031
Tr 23
PK 331-3.2
6067
PGC 2793401
PK 330-3.1
6397
Cr 299
IC 4642
5925
PGC 58814
Lynga 4
-55°
5999
6087
6005
Cr 292
PGC 58547
PGC 58549
PK 325-4.1
PGC 59216
6215A
6215
6221
PK 327-7.1
PGC 59880
6305
PGC 58138
PK 322-2.1
IC 4652
PGC 60216
IC 4646
PGC 58999
PGC 59373
6156
PGC 57928
PGC 57888
6025
Pismis 20
PGC 60842
PGC 60297
PGC 60292
PGC 58742
PGC 58106
PGC 57652
PGC 57537
PGC 58609
PGC 2793346
PGC 57612
PGC 60594
PGC 59111
PGC 57649
PGC 57679
PGC 57546
-60°
95
96
17h30m
17h
16h30m
16h
15h30m
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Chart 83



1 2 3 4 5 6 7 8 9 10
64
65
15h30m
15h
14h30m
Lupus
Centaurus
Norma
Circinus
TrA
-35°
-40°
-45°
-50°
-55°
-60°
82
84
96
97
16h
15h30m
15h
14h30m
14h
PGC 52454
PGC 52391
PGC 52484
IC 4393
IC 4391
IC 4388
IC 4430
PGC 51822
PGC 51385
IC 4378
5824
B228
PGC 52427
PGC 53431
PGC 53426
5843
IC 4451
IC 4464
PGC 51820
PGC 53409
PGC 53392
PGC 53391
PGC 52867
PGC 52734
PGC 53049
PGC 53361
IC 4421
PGC 50658
PGC 54755
PGC 54877
PGC 54637
5873
PGC 54078
5986
PGC 55718
PGC 55256
PGC 54349
PGC 52471
PGC 54166
PGC 53945
PGC 54685
5786
PGC 54283
IC 4527
PGC 53535
IC 4518-3
PK 327+13.1
IC 4523
PGC 52886
IC 4441
IC 4362
5530
5483
IC 4472
5643
IC 4406
IC 4386
5688
5882
IC 4390
5670
IC 4359
IC 4402
5489
PGC 4988
PGC 54392
PGC 53500
PGC 51087
5516
PGC 50966
PGC 50448
5460
PGC 49722
PK 330+ 4.1
BH 176
5927
5946
PGC 50706
PK 329+ 2.1
5800
Hogg 18
5764
PK 316+ 8.1
Lynga 6
5749
Tr 23
5925
5822
6031
Lynga 4
5823
PK 315+ 5.1
PGC 50330
5999
5662
5715
6005
Cr 292
PK 325-4.1
PK 322-2.1
Pismis 20
5606
5284
PK 318-2.1
Rigel Kentaurus
5617
6025
PK 318-2.2
Hogg 17
Tr 22
PK 315-0.1
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Chart 84

65 66 83 85 96 97 98

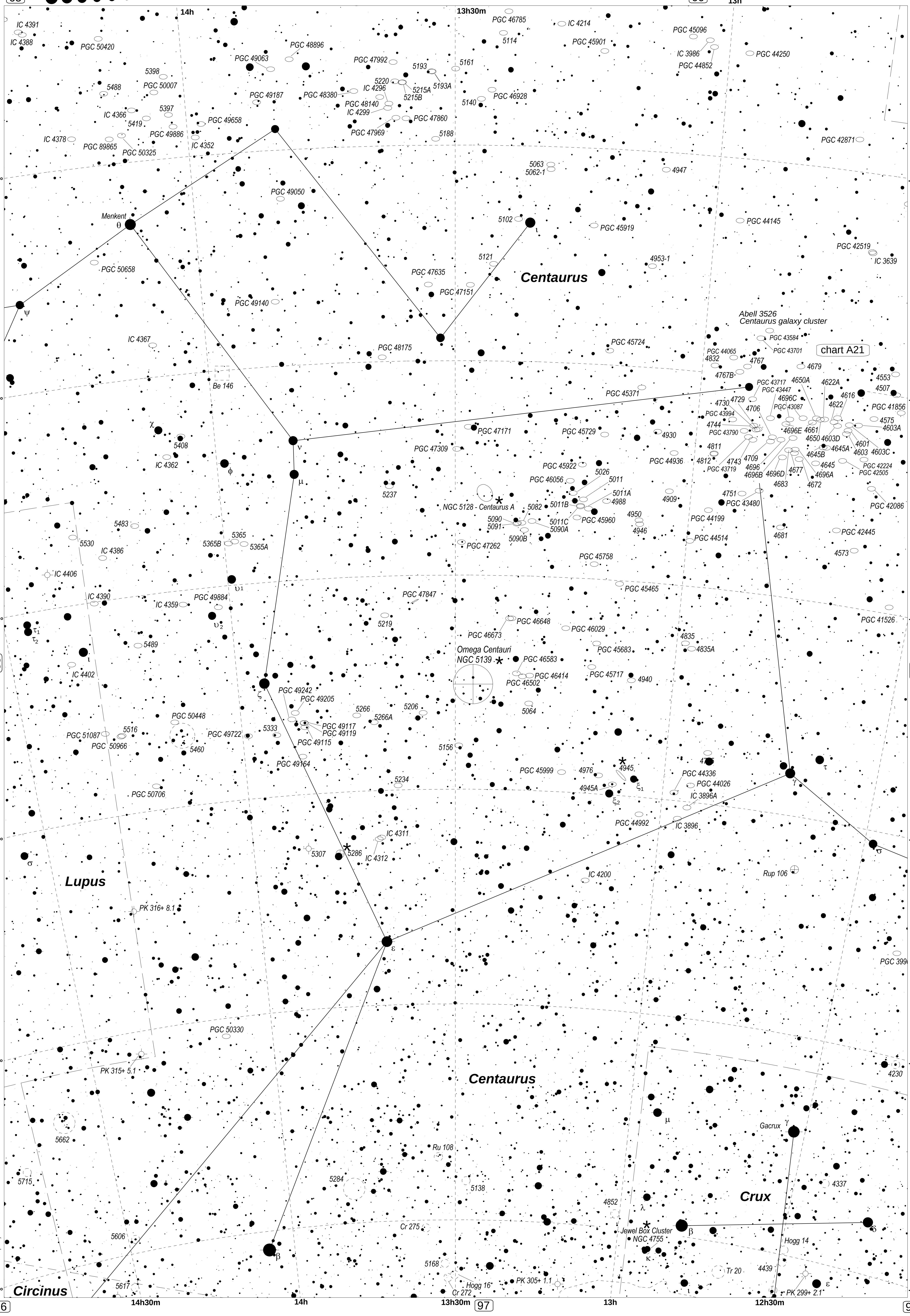
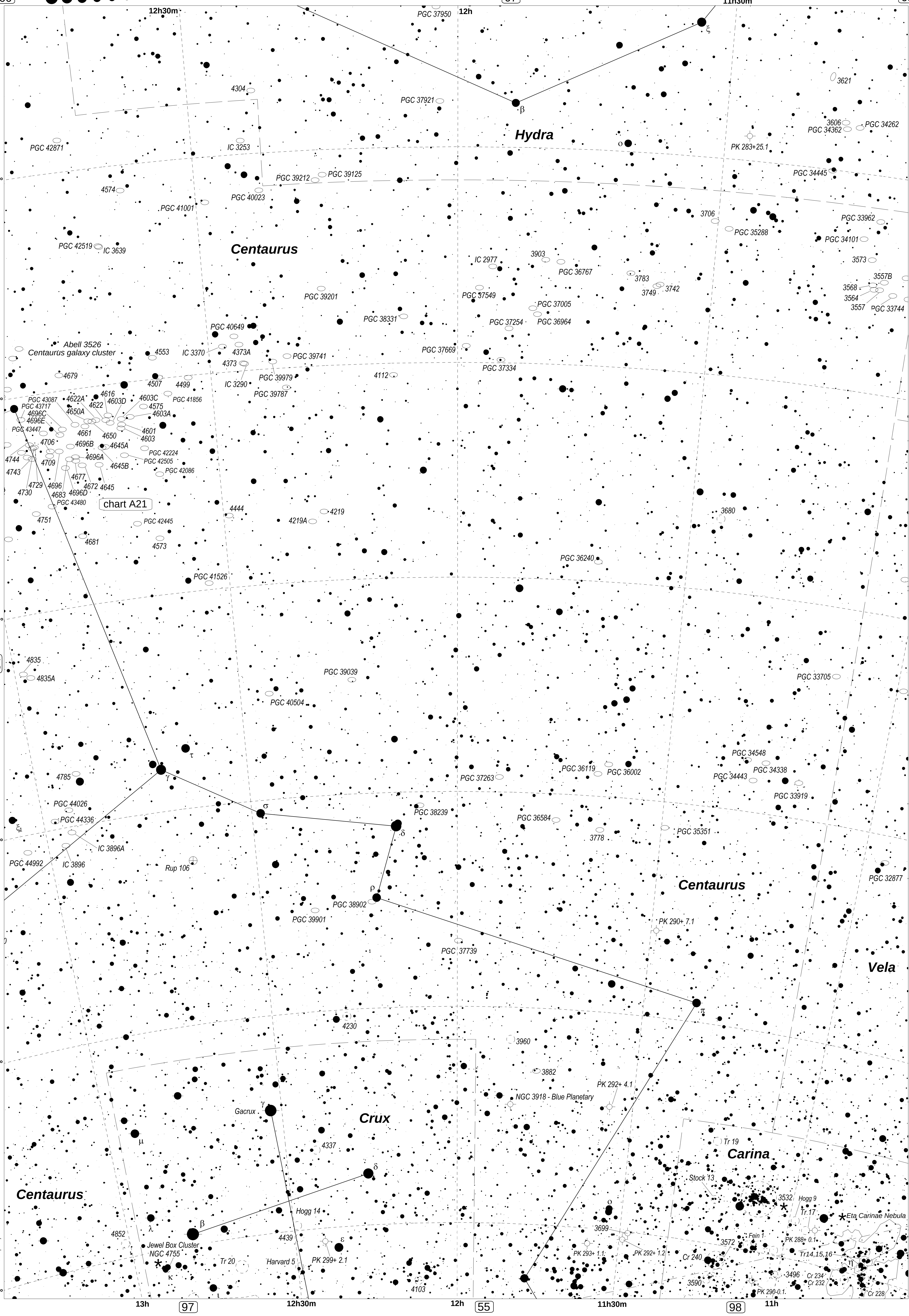


Chart 85

66 67 68



84 86 97 55 98

Chart 86

1 2 3 4 5 6 7 8 9 10

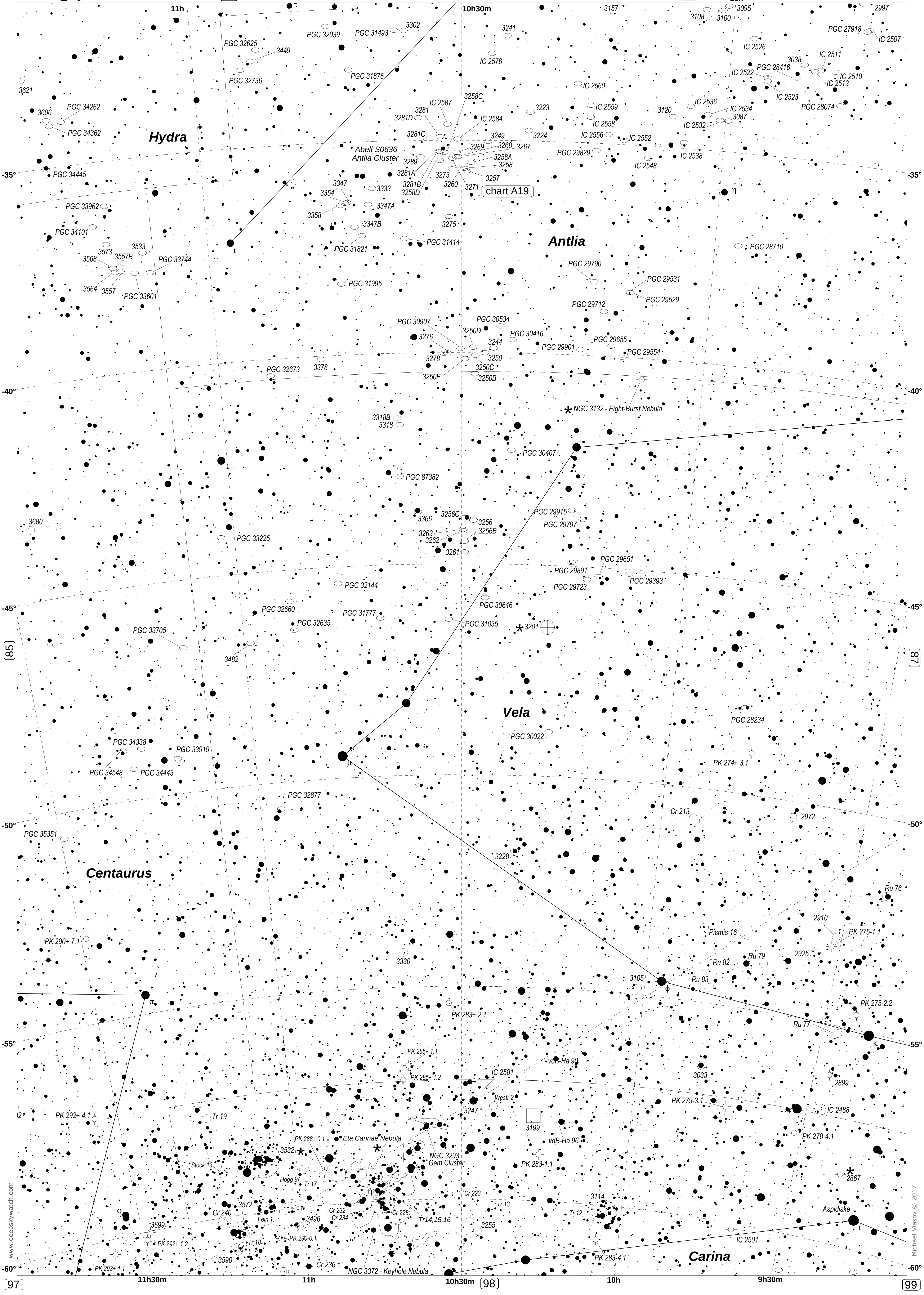
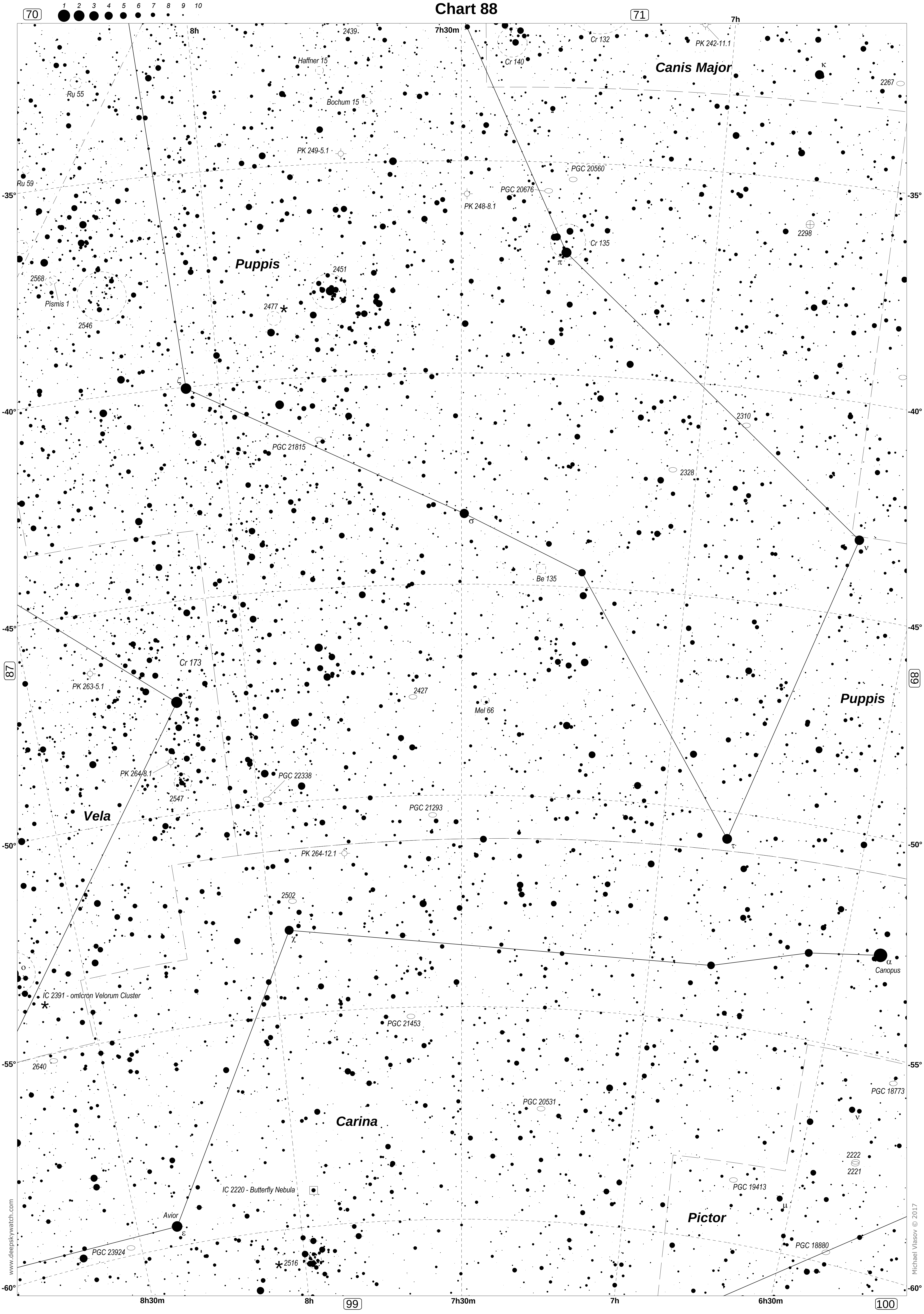


Chart 87



1 2 3 4 5 6 7 8 9 10
69
70
9h30m
9h
8h30m
2997
IC 2507
PGC 27918
IC 2469
Cr 198
PK 254+ 5.1
PGC 25006
2658
2588
Ru 55
PGC 27135
IC 2510
PGC 24676
2663
PGC 28074
PGC 24860
2635
Antlia
Ru 59
PGC 26112
Pyxis
-35°
PGC 27006
PGC 26884
2579
Cr 185
2818
Pyxis
2568
Pismis 1
2845
2546
PGC 25167
Pismis 5
Puppis
PK 261+ 2.1
2849
-40°
Cr 197
SL 4
2671
2792
Tr 10
Ru 67
Pismis 4
2659
PK 265-2.1
Pismis 12
Bochum 7
Waterloo 6
NGC 2736 - Herschel's Ray
Pismis 6
2645
Pismis 8
Vela
-45°
PK 263-5.1
2660
Cr 173
Vela
86
88
IC 2395
PGC 28234
2670
Mrk 18
PK 264-8.1
PK 274+ 3.1
2547
PK 269-3.1
2972
PGC 22338
Cr 213
Pismis 13
-50°
IC 2391 - omicron Velorum Cluster
Ru 76
2669
2910
PK 275-1.1
2502
2925
Pismis 16
Ru 79
PGC 2791343
Ru 82
PK 275-2.2
PK 275-4.1
Carina
Ru 83
3105
Ru 77
2640
PK 275-4.2
-55°
2899
3033
IC 2488
vdB-Ha 90
PK 278-4.1
PK 279-3.1
2867
Carina
2714
3199
Aspidiske
PGC 23924
IC 2220 - Butterfly Nebula
Avior
PK 283-1.1
PGC 26062
3114
IC 2501
Tr 12
PGC 26888
2516
PGC 26532
-60°
10h
98
9h30m
9h
8h30m
99
8h
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Chart 88


70
71
87
89
99
100
1 2 3 4 5 6 7 8 9 10
8h
7h30m
7h
8h30m
6h30m
-35°
-40°
-45°
-50°
-55°
-60°
Puppis
Canis Major
Vela
Carina
Pictor
2439
Cr 132
PK 242-11.1
Haffner 15
Cr 140
2267
Ru 55
Bochum 15
PK 249-5.1
PGC 20560
Ru 59
PGC 20676
PK 248-8.1
2298
Cr 135
2451
2568
Pismis 1
2477
2546
2310
PGC 21815
2328
Be 135
Cr 173
PK 263-5.1
2427
Mel 66
PK 264-8.1
PGC 22338
2547
PGC 21293
PK 264-12.1
2502
Canopus
IC 2391 - omicron Velorum Cluster
PGC 21453
2640
PGC 18773
PGC 20531
2222
2221
PGC 19413
IC 2220 - Butterfly Nebula
Avior
PGC 18880
PGC 23924
2516
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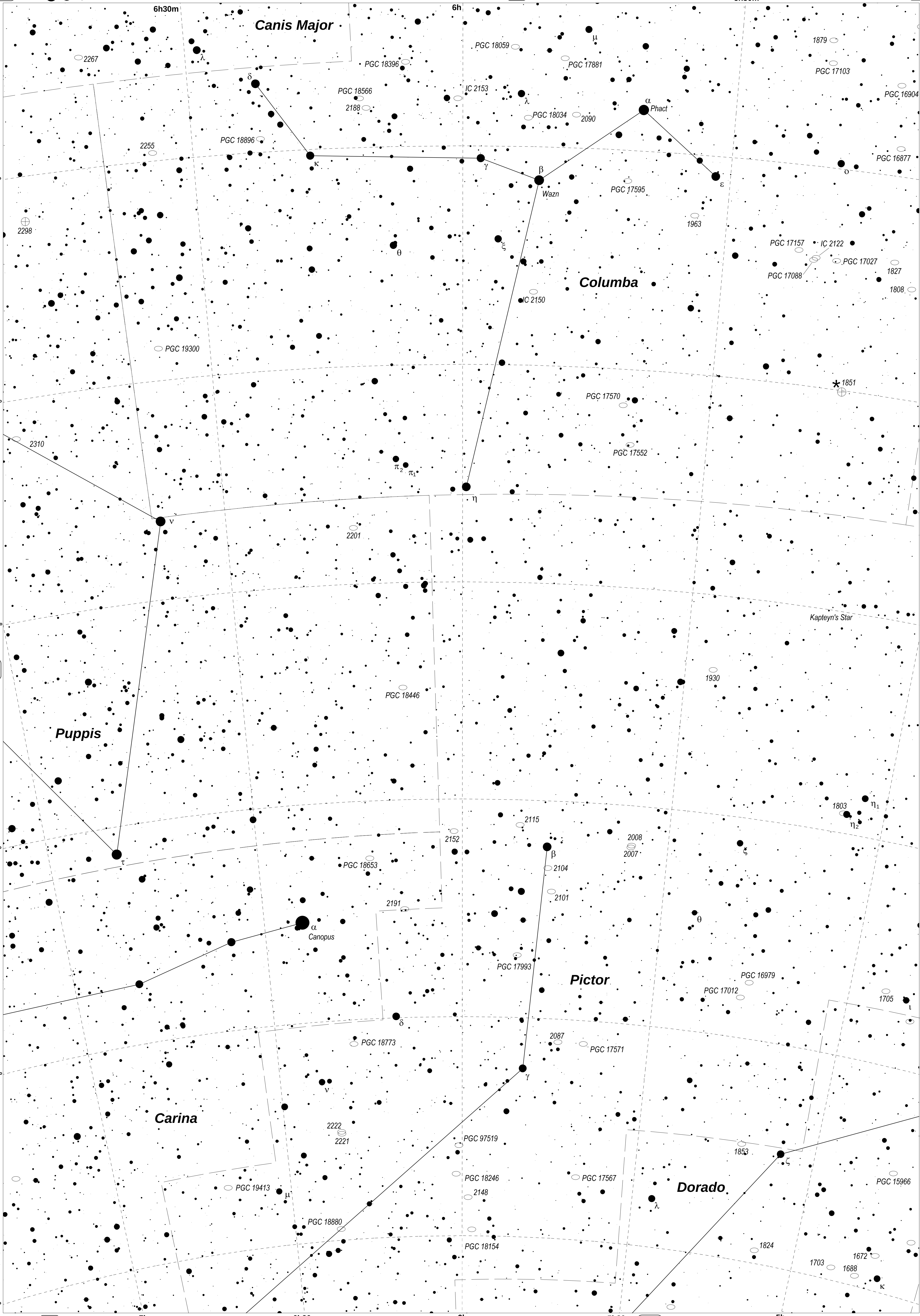
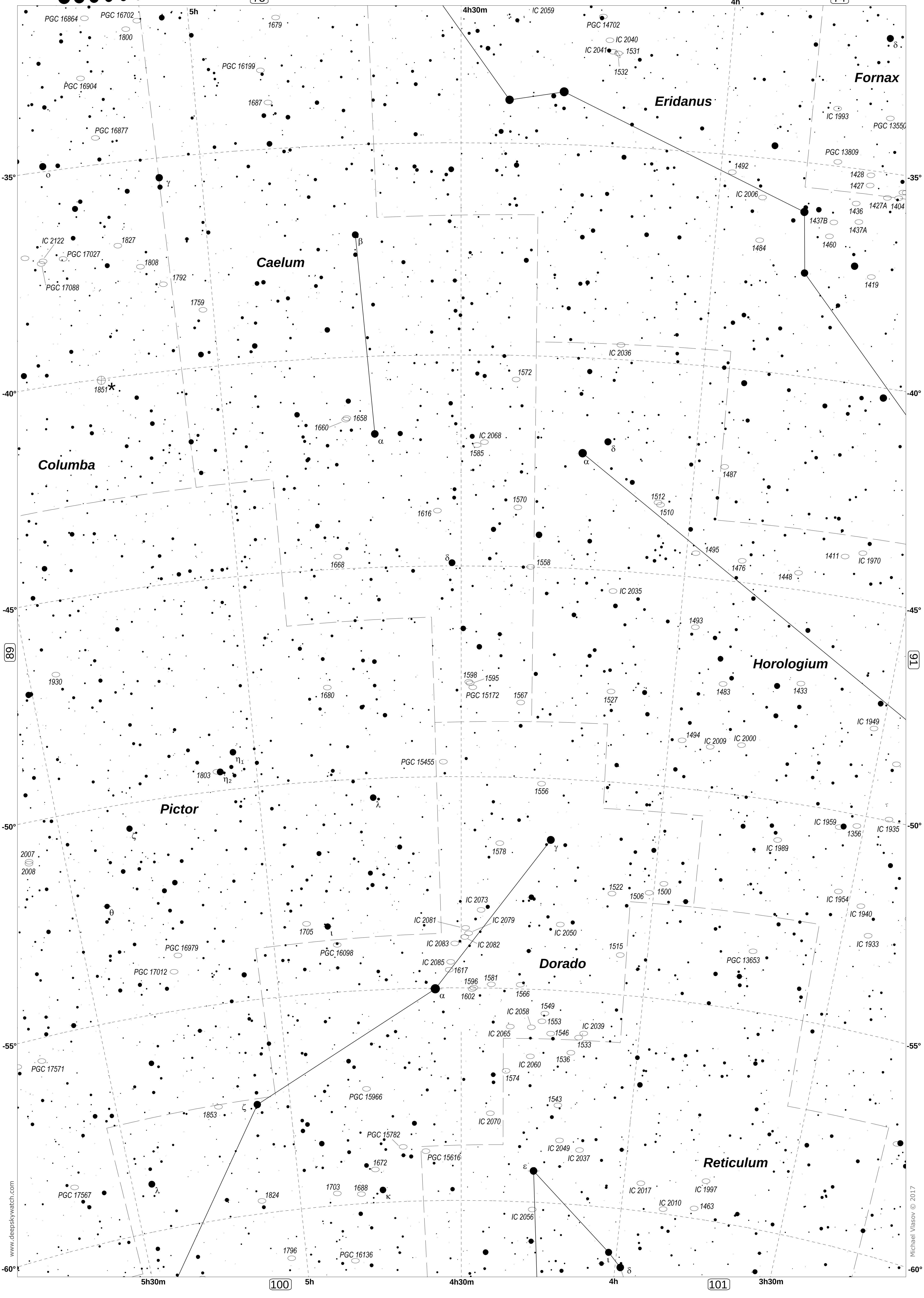
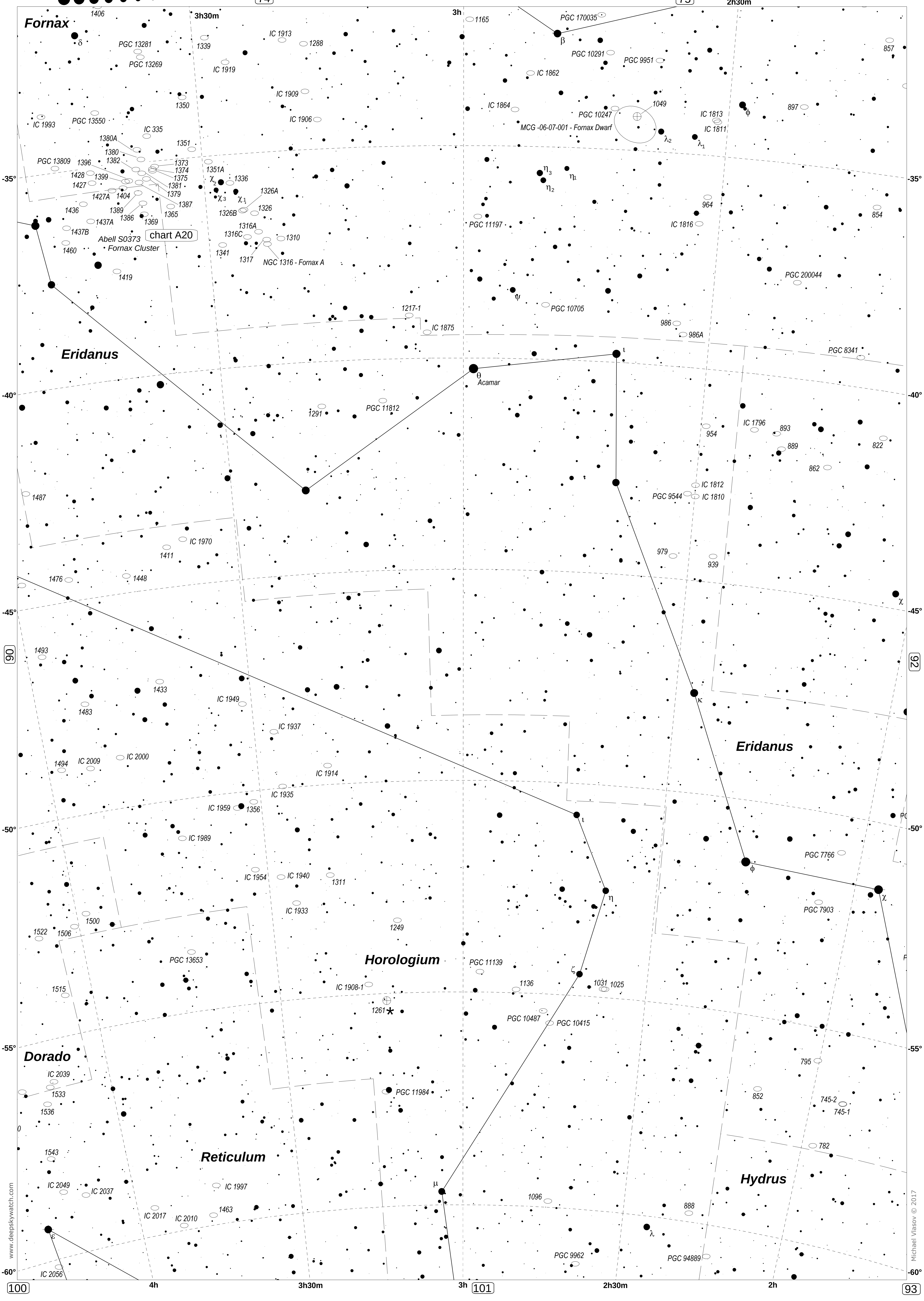

71
72
73
1 2 3 4 5 6 7 8 9 10
6h30m
6h
5h30m
Canis Major
Columba
Puppis
Pictor
Carina
Dorado
Phact
Wazn
Canopus
Kapteyn's Star
PGC 18059
PGC 17881
PGC 18396
2267
PGC 18566
2188
IC 2153
PGC 18034
2090
PGC 18896
2255
PGC 17595
1963
2298
PGC 17157
IC 2122
PGC 17027
PGC 17088
1827
1808
IC 2150
PGC 19300
1879
PGC 17103
PGC 16904
PGC 16877
1851
PGC 17570
2310
PGC 17552
2201
1930
PGC 18446
1803
2115
2152
2008
2007
PGC 18653
2104
2101
2191
PGC 17993
PGC 16979
PGC 17012
1705
2087
PGC 18773
PGC 17571
2222
2221
PGC 97519
1853
PGC 18246
PGC 17567
PGC 15966
PGC 19413
2148
PGC 18880
PGC 18154
1824
1672
1703
1688
-35°
-40°
-45°
-50°
-55°
-60°
88
90
7h
6h30m
6h
5h30m
5h
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Chart 90



1 2 3 4 5 6 7 8 9 10
73
74
68
91
100
101
5h
4h30m
4h
5h30m
3h30m
-35°
-40°
-45°
-50°
-55°
-60°
Eridanus
Fornax
Caelum
Columba
Horologium
Pictor
Dorado
Reticulum
PGC 16864
PGC 16702
1800
1679
IC 2059
PGC 14702
IC 2040
IC 2041
1531
1532
PGC 16199
PGC 16904
1687
IC 1993
PGC 13550
PGC 16877
PGC 13809
1492
1428
1427
IC 2006
1436
1427A
1404
1437B
1437A
IC 2122
1827
PGC 17027
1808
PGC 17088
1792
1460
1484
1419
1759
IC 2036
1572
1851
1660
1658
IC 2068
1585
1487
1570
1512
1510
1616
1495
1411
IC 1970
1668
1558
1476
1448
IC 2035
1493
1930
1680
1598
1595
PGC 15172
1567
1527
1483
1433
IC 1949
1494
IC 2009
IC 2000
PGC 15455
1803
1556
IC 1959
1356
IC 1935
2007
2008
1578
IC 1989
1522
1506
1500
IC 1954
IC 2073
IC 2081
IC 2079
1705
IC 2083
IC 2082
IC 2050
IC 1940
PGC 16098
PGC 16979
1515
IC 1933
IC 2085
PGC 13653
PGC 17012
1617
1581
1596
1566
1602
1549
IC 2058
1553
IC 2039
IC 2065
1546
1533
IC 2060
1536
PGC 17571
1574
PGC 15966
1543
1853
IC 2070
PGC 15782
IC 2049
PGC 15616
IC 2037
1672
PGC 17567
1703
1688
1824
IC 2017
IC 1997
IC 2010
1463
IC 2056
1796
PGC 16136
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Chart 91



1 2 3 4 5 6 7 8 9 10
74
75
3h30m
3h
2h30m
Fornax
1406
δ
PGC 13281
PGC 13269
1339
IC 1913
1288
IC 1919
1165
PGC 170035
β
PGC 10291
PGC 9951
857
IC 1862
1350
IC 1909
IC 1864
1049
PGC 10247
MCG -06-07-001 - Fornax Dwarf
IC 1813
IC 1811
φ
897
IC 1993
PGC 13550
IC 1906
λ2
λ1
IC 335
1380A
1351
1380
1382
PGC 13809
1396
1373
1374
1375
1351A
1428
1399
1427
1381
1379
1336
χ2
χ3
χ1
1326A
1427A
1404
1387
1436
1389
1386
1369
1365
1326B
1326
η3
η1
η2
964
854
IC 1816
PGC 11197
1437A
1437B
1316A
1316C
1310
Abell S0373
Fornax Cluster
chart A20
1341
1317
NGC 1316 - Fornax A
1460
1419
ψ
PGC 10705
PGC 200044
1217-1
IC 1875
986
986A
PGC 8341
Eridanus
ι
θ
Acamar
-35°
-40°
1291
PGC 11812
IC 1796
893
889
822
954
862
IC 1812
PGC 9544
IC 1810
1487
IC 1970
1411
979
939
1476
1448
-45°
χ
90
92
1493
1433
IC 1949
κ
1483
IC 1937
Eridanus
1494
IC 2009
IC 2000
IC 1914
IC 1959
1356
IC 1935
ι
-50°
IC 1989
PGC 7766
φ
IC 1954
IC 1940
1311
η
χ
IC 1933
PGC 7903
1500
1249
1522
1506
Horologium
PGC 13653
PGC 11139
ζ
1136
1031
1025
1515
IC 1908-1
1261
PGC 10487
PGC 10415
-55°
Dorado
IC 2039
1533
PGC 11984
795
852
745-2
745-1
1536
782
1543
Reticulum
Hydrus
μ
IC 2049
IC 2037
IC 1997
1096
888
IC 2017
IC 2010
1463
λ
ε
PGC 9962
PGC 94889
-60°
IC 2056
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100
4h
3h30m
3h
101
2h30m
2h
93

Chart 92

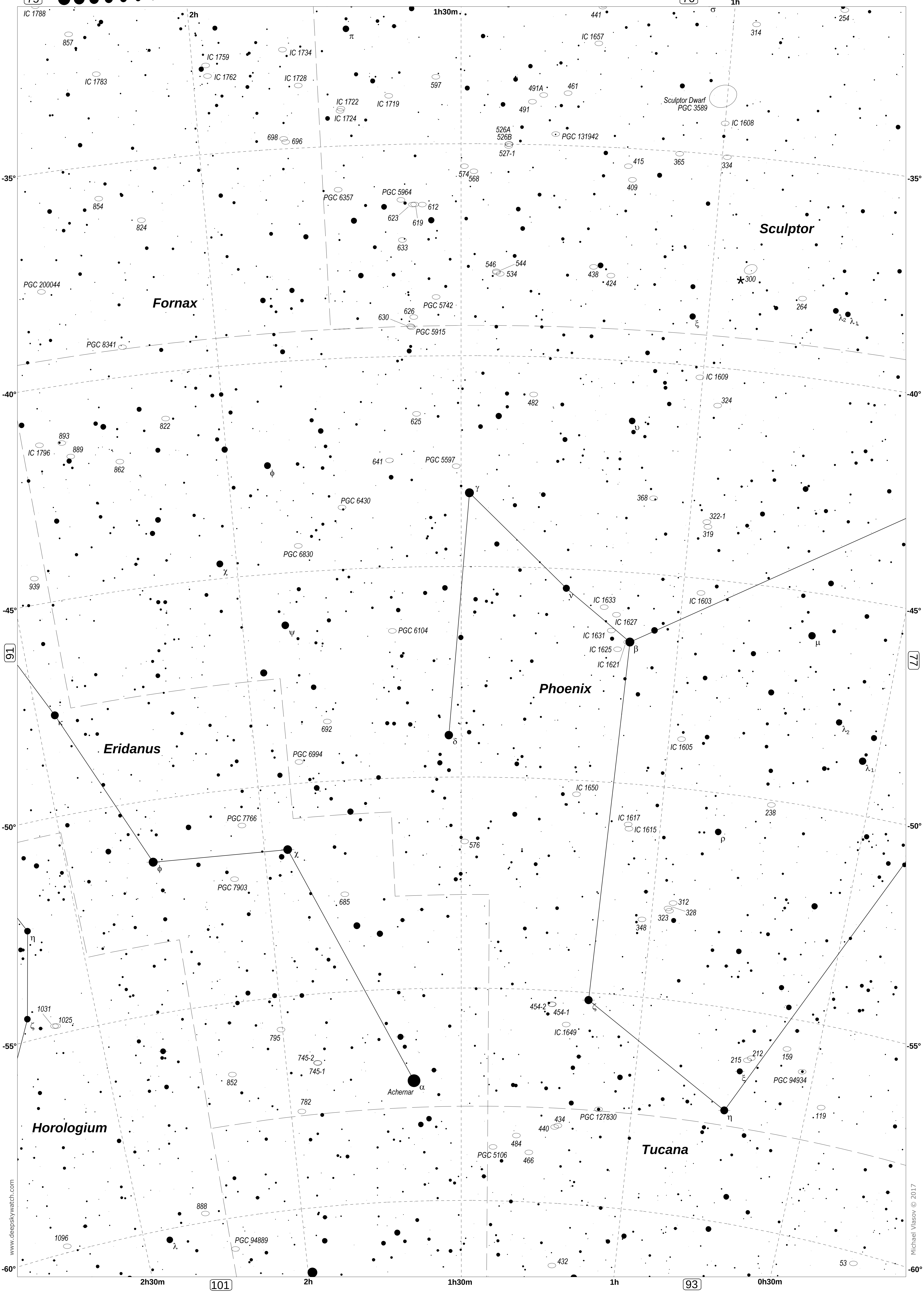

1 2 3 4 5 6 7 8 9 10
75
76
91
77
101
93
2h
1h30m
1h
2h30m
0h30m
-35°
-40°
-45°
-50°
-55°
-60°
Fornax
Sculptor
Phoenix
Eridanus
Horologium
Tucana
Sculptor Dwarf
PGC 3589
Achernar
IC 1788
857
IC 1759
IC 1734
IC 1762
IC 1783
IC 1728
IC 1722
IC 1724
IC 1719
597
441
IC 1657
491A
461
491
254
314
IC 1608
698
696
526A
526B
527-1
PGC 131942
415
365
334
574
568
409
854
824
PGC 6357
PGC 5964
623
619
612
633
546
544
534
438
424
300
PGC 200044
PGC 5742
626
630
PGC 5915
264
PGC 8341
IC 1609
482
324
822
625
893
889
IC 1796
862
641
PGC 5597
368
PGC 6430
322-1
319
PGC 6830
939
IC 1633
IC 1603
IC 1627
IC 1631
IC 1625
IC 1621
PGC 6104
692
IC 1605
PGC 6994
IC 1650
238
PGC 7766
IC 1617
IC 1615
576
PGC 7903
685
312
323
328
348
1031
1025
454-2
454-1
IC 1649
795
745-2
745-1
212
215
159
PGC 94934
852
782
PGC 127830
119
434
440
484
PGC 5106
466
888
1096
PGC 94889
432
53
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Chart 93

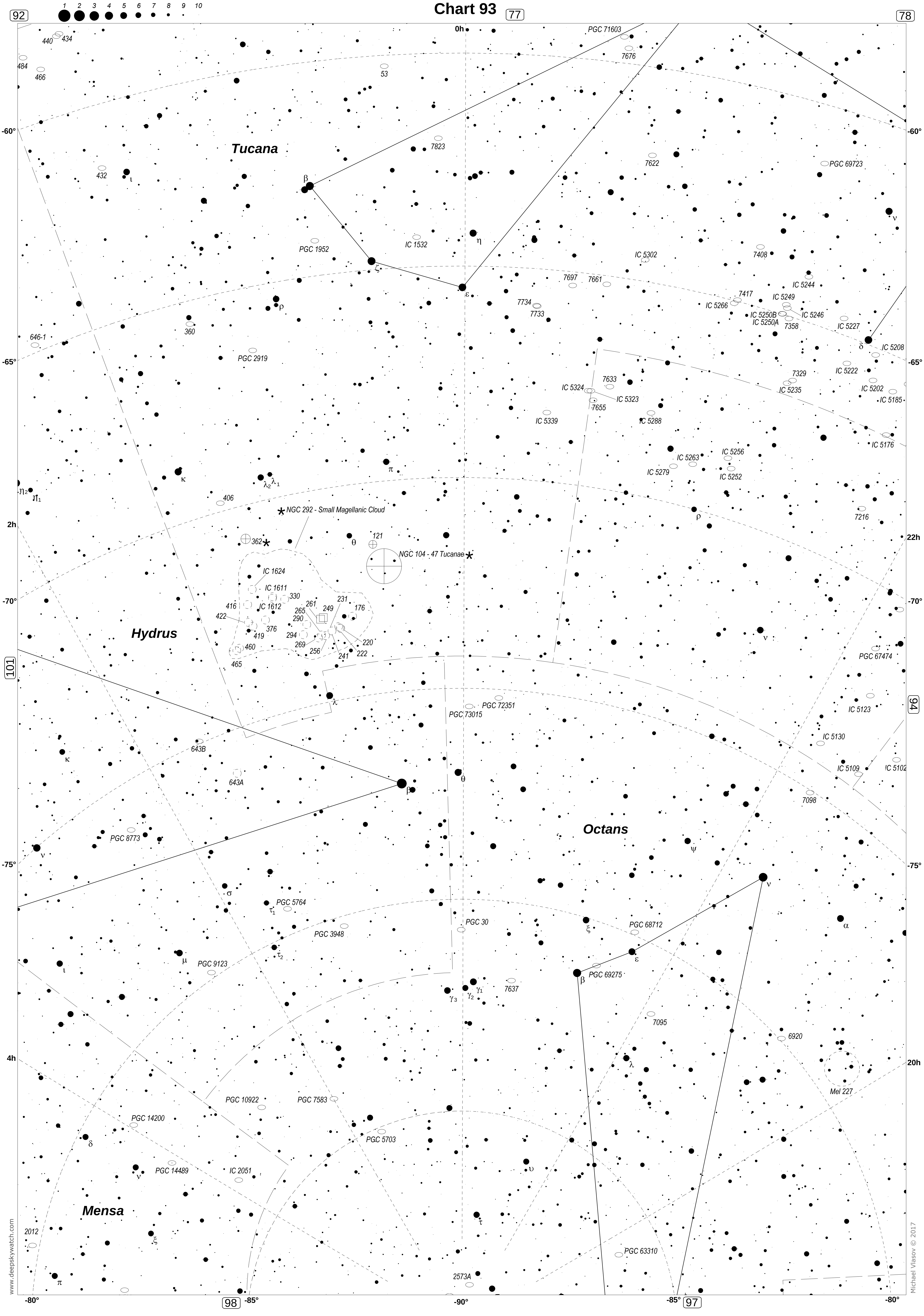
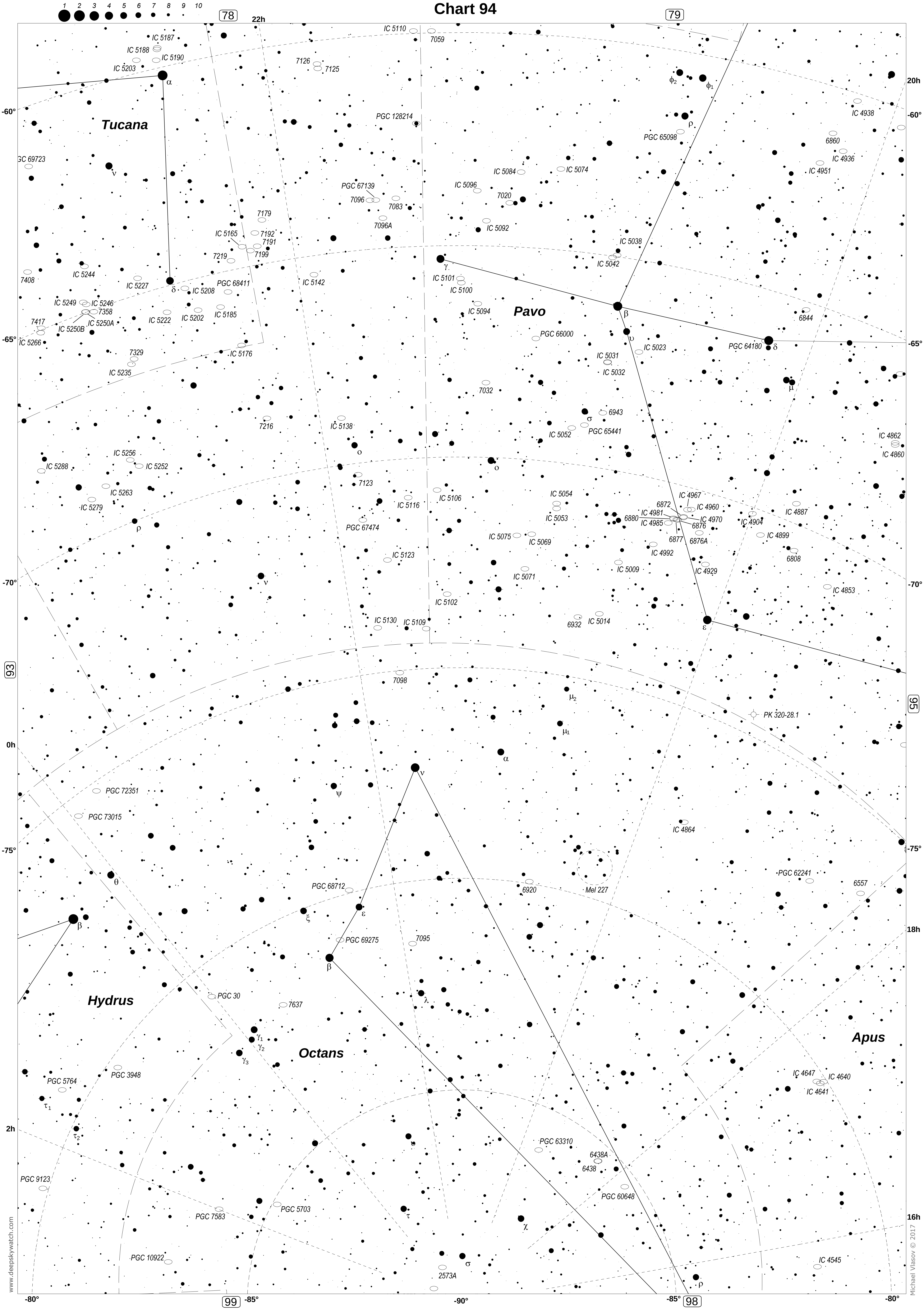
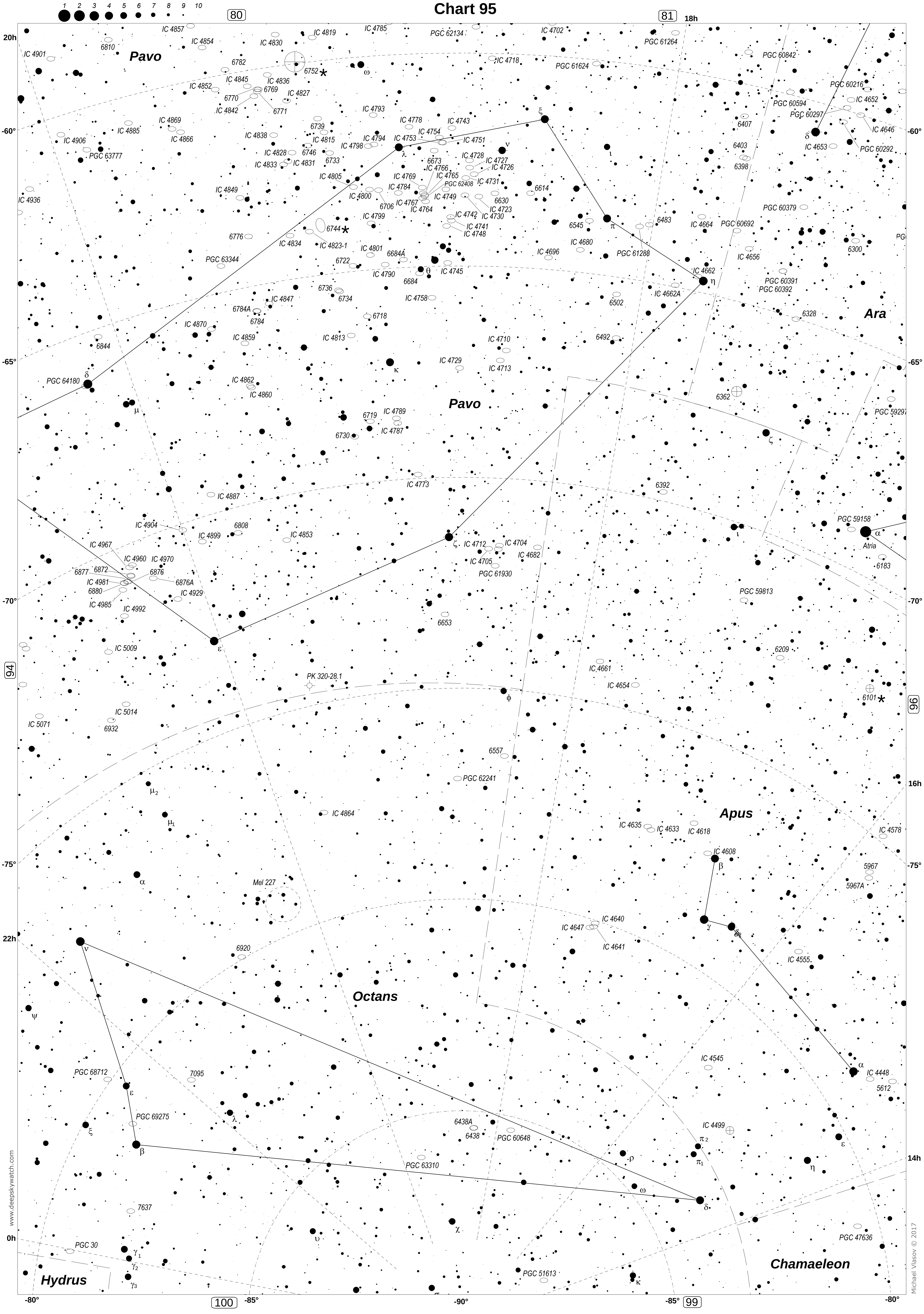

92
77
78
1 2 3 4 5 6 7 8 9 10
0h
Tucana
Hydrus
Octans
Mensa
NGC 292 - Small Magellanic Cloud
NGC 104 - 47 Tucanae
PGC 71603
7676
53
440
434
484
466
7823
7622
PGC 69723
432
PGC 1952
IC 1532
IC 5302
7408
IC 5244
7697
7661
7417
IC 5249
IC 5266
IC 5250B
IC 5250A
IC 5246
7358
IC 5227
7734
7733
360
646-1
PGC 2919
IC 5208
7633
IC 5324
IC 5323
7655
7329
IC 5222
IC 5235
IC 5202
IC 5185
IC 5339
IC 5288
IC 5176
IC 5263
IC 5256
IC 5279
IC 5252
406
7216
121
362
IC 1624
IC 1611
IC 1612
330
416
422
265
261
249
231
176
290
376
419
294
269
256
241
222
220
460
465
PGC 67474
PGC 72351
PGC 73015
IC 5123
IC 5130
643B
IC 5109
IC 5102
643A
7098
PGC 8773
PGC 5764
PGC 3948
PGC 30
PGC 68712
PGC 9123
PGC 69275
7637
7095
6920
Mel 227
PGC 10922
PGC 7583
PGC 14200
PGC 5703
PGC 14489
IC 2051
2012
PGC 63310
2573A
-60°
-65°
-70°
-75°
-80°
-85°
-90°
2h
4h
22h
20h
101
94
98
97
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Chart 94



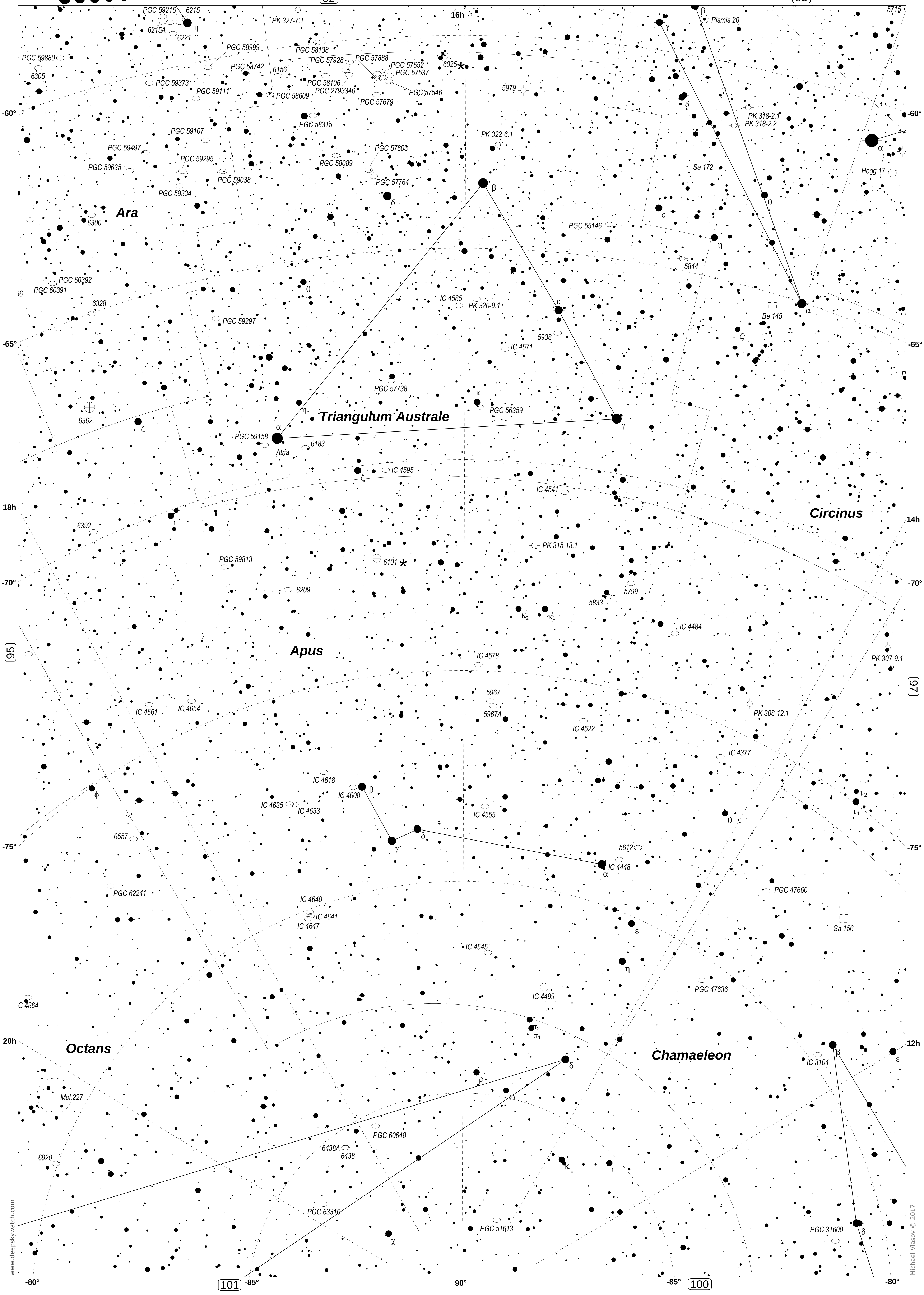
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Chart 95



1 2 3 4 5 6 7 8 9 10
80
81
18h
20h
22h
0h
16h
14h
-60°
-65°
-70°
-75°
-80°
-85°
-90°
94
96
100
99
Pavo
Ara
Apus
Octans
Chamaeleon
Hydrus
Atria
Mel 227
PK 320-28.1
IC 4857
IC 4854
IC 4830
IC 4819
IC 4785
PGC 62134
IC 4702
PGC 61264
IC 4901
6810
6782
6752
IC 4718
PGC 61624
PGC 60842
IC 4852
IC 4845
IC 4836
6769
6770
IC 4827
IC 4842
6771
PGC 60216
IC 4652
PGC 60594
PGC 60297
IC 4646
6407
IC 4869
IC 4885
IC 4866
IC 4906
PGC 63777
IC 4793
IC 4778
IC 4743
6739
IC 4838
IC 4815
IC 4794
IC 4753
IC 4754
IC 4751
IC 4798
IC 4828
6746
IC 4833
IC 4831
6733
6403
6398
IC 4653
PGC 60292
IC 4728
IC 4727
6673
IC 4766
IC 4726
IC 4805
IC 4769
IC 4765
PGC 62408
IC 4731
IC 4849
IC 4784
IC 4800
6706
IC 4767
IC 4764
IC 4749
6614
6630
IC 4723
IC 4730
IC 4742
IC 4741
IC 4748
IC 4936
IC 4799
6744
6776
IC 4834
IC 4823-1
6545
6483
IC 4664
PGC 60692
PGC 60379
IC 4680
PGC 61288
IC 4801
6684A
IC 4696
IC 4656
6300
PGC 63344
6722
IC 4790
6684
IC 4745
IC 4662
PGC 60391
PGC 60392
6736
6734
IC 4758
IC 4847
IC 4662A
6502
6784A
6784
6718
6328
IC 4870
IC 4859
IC 4813
IC 4710
6492
6844
IC 4713
IC 4729
PGC 64180
IC 4862
IC 4860
6362
PGC 59297
6719
IC 4789
IC 4787
6730
IC 4773
IC 4887
6392
PGC 59158
IC 4904
6808
IC 4899
IC 4853
IC 4712
IC 4704
IC 4682
IC 4705
PGC 61930
IC 4967
IC 4960
IC 4970
6877
6872
6876
IC 4981
6876A
6880
IC 4929
IC 4985
IC 4992
6183
PGC 59813
6653
IC 5009
6209
IC 4661
IC 4654
6101
IC 5014
6932
IC 5071
6557
PGC 62241
IC 4864
IC 4635
IC 4633
IC 4618
IC 4578
IC 4608
5967
5967A
IC 4640
IC 4647
IC 4641
6920
IC 4555
IC 4545
IC 4448
5612
PGC 68712
7095
PGC 69275
6438A
6438
PGC 60648
IC 4499
PGC 63310
7637
PGC 47636
PGC 30
PGC 51613
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Chart 96



1 2 3 4 5 6 7 8 9 10
82
83
95
97
101
100
16h
18h
14h
20h
12h
-60°
-65°
-70°
-75°
-80°
-85°
90°
Ara
Triangulum Australe
Apus
Circinus
Octans
Chamaeleon
Atria
PGC 59216
6215
6215A
6221
PK 327-7.1
PGC 58999
PGC 58138
PGC 59880
6305
PGC 58742
6156
PGC 57928
PGC 57888
PGC 57652
PGC 57537
6025
PGC 59373
PGC 59111
PGC 58106
PGC 2793346
PGC 58609
PGC 57546
PGC 57679
5979
Pismis 20
PK 318-2.1
PK 318-2.2
PGC 59107
PGC 58315
PK 322-6.1
PGC 59497
PGC 59295
PGC 57803
PGC 58089
PGC 59635
PGC 59038
PGC 57764
PGC 59334
Sa 172
Hogg 17
6300
PGC 55146
5844
PGC 60392
PGC 60391
IC 4585
PK 320-9.1
6328
PGC 59297
5938
IC 4571
Be 145
PGC 57738
PGC 56359
6362
PGC 59158
6183
IC 4595
IC 4541
6392
PK 315-13.1
PGC 59813
6101
6209
5799
5833
IC 4484
IC 4578
PK 307-9.1
5967
5967A
IC 4661
IC 4654
IC 4522
PK 308-12.1
IC 4377
IC 4618
IC 4608
IC 4635
IC 4633
IC 4555
6557
5612
IC 4448
PGC 62241
PGC 47660
IC 4640
IC 4641
IC 4647
Sa 156
IC 4545
IC 4499
PGC 47636
C 4864
IC 3104
Mel 227
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6438A
6438
6920
PGC 63310
PGC 51613
PGC 31600
5715
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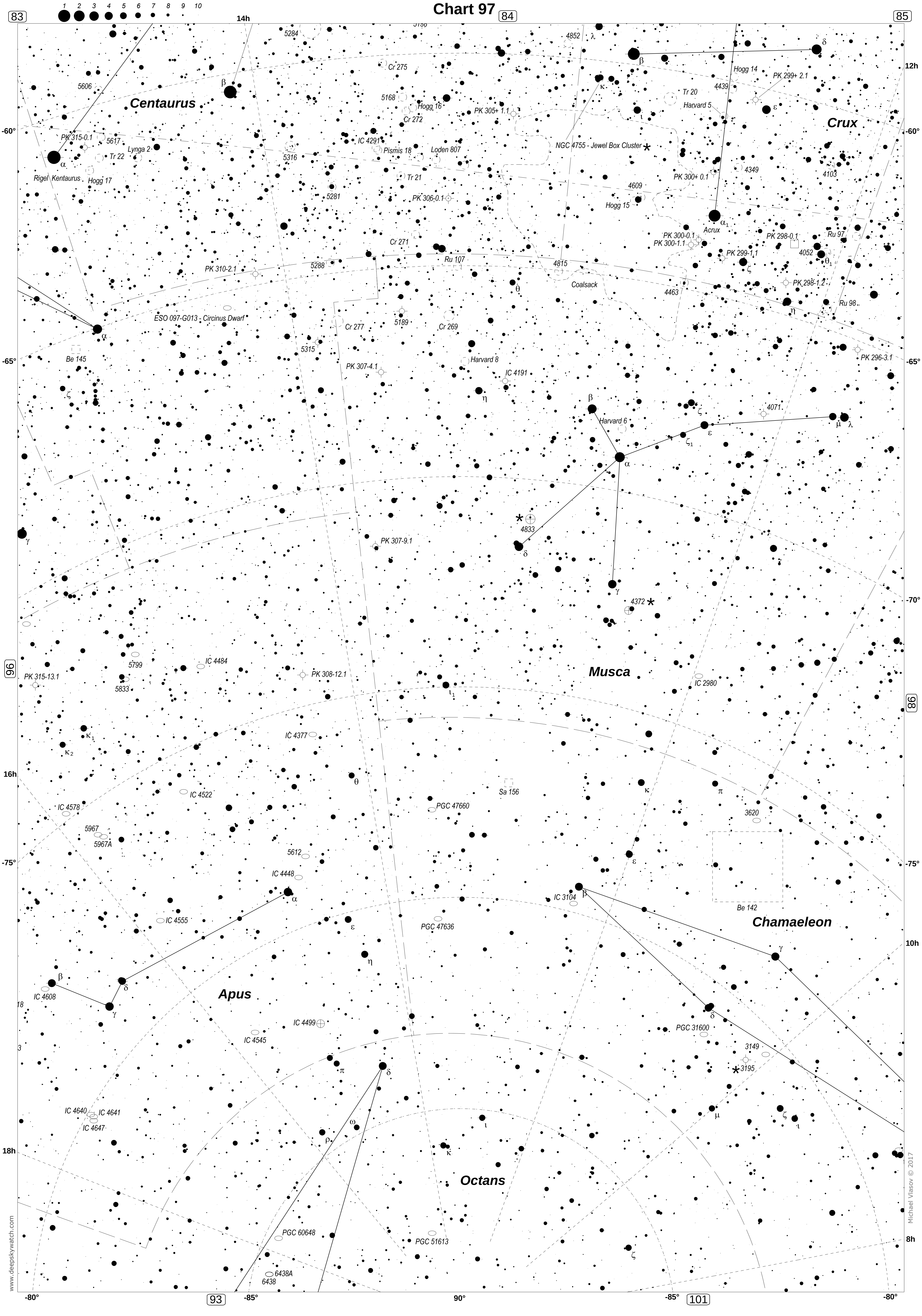
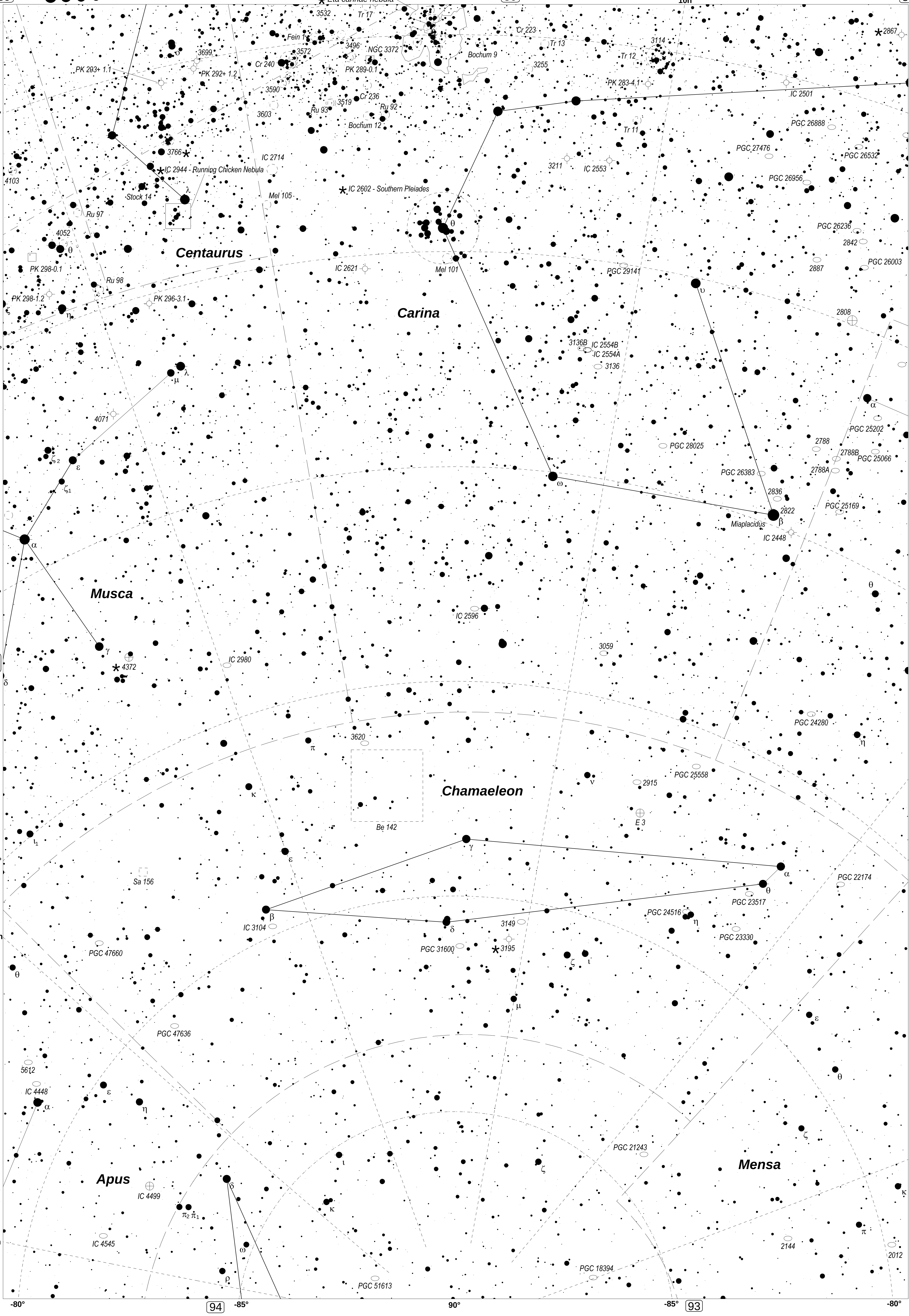

83
84
85
96
86
93
101
1 2 3 4 5 6 7 8 9 10
14h
12h
16h
10h
18h
8h
-60°
-65°
-70°
-75°
-80°
-85°
90°
Centaurus
Crux
Musca
Chamaeleon
Apus
Octans
Rigel Kentaurus
Acrux
Coalsack
NGC 4755 - Jewel Box Cluster
ESO 097-G013 - Circinus Dwarf
PK 315-0.1
5617
Tr 22
Lynga 2
Hogg 17
5606
Cr 275
5168
Hogg 16
Cr 272
PK 305+ 1.1
IC 4291
Pismis 18
Loden 807
5316
Tr 21
5281
PK 306-0.1
Cr 271
Ru 107
4815
PK 310-2.1
5288
Cr 277
5189
Cr 269
5315
Be 145
PK 307-4.1
Harvard 8
IC 4191
4852
Hogg 14
PK 299+ 2.1
4439
Tr 20
Harvard 5
4349
4103
4609
Hogg 15
PK 300+ 0.1
PK 300-0.1
PK 300-1.1
PK 298-0.1
Ru 97
4052
PK 299-1.1
4463
PK 298-1.2
Ru 98
PK 296-3.1
4071
Harvard 6
4833
PK 307-9.1
4372
IC 2980
5799
IC 4484
PK 315-13.1
5833
PK 308-12.1
IC 4377
Sa 156
IC 4522
IC 4578
PGC 47660
5967
5967A
3620
5612
Be 142
IC 4448
IC 3104
IC 4555
PGC 47636
IC 4608
IC 4499
IC 4545
PGC 31600
3149
3195
IC 4640
IC 4641
IC 4647
PGC 60648
PGC 51613
6438A
6438
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Chart 98

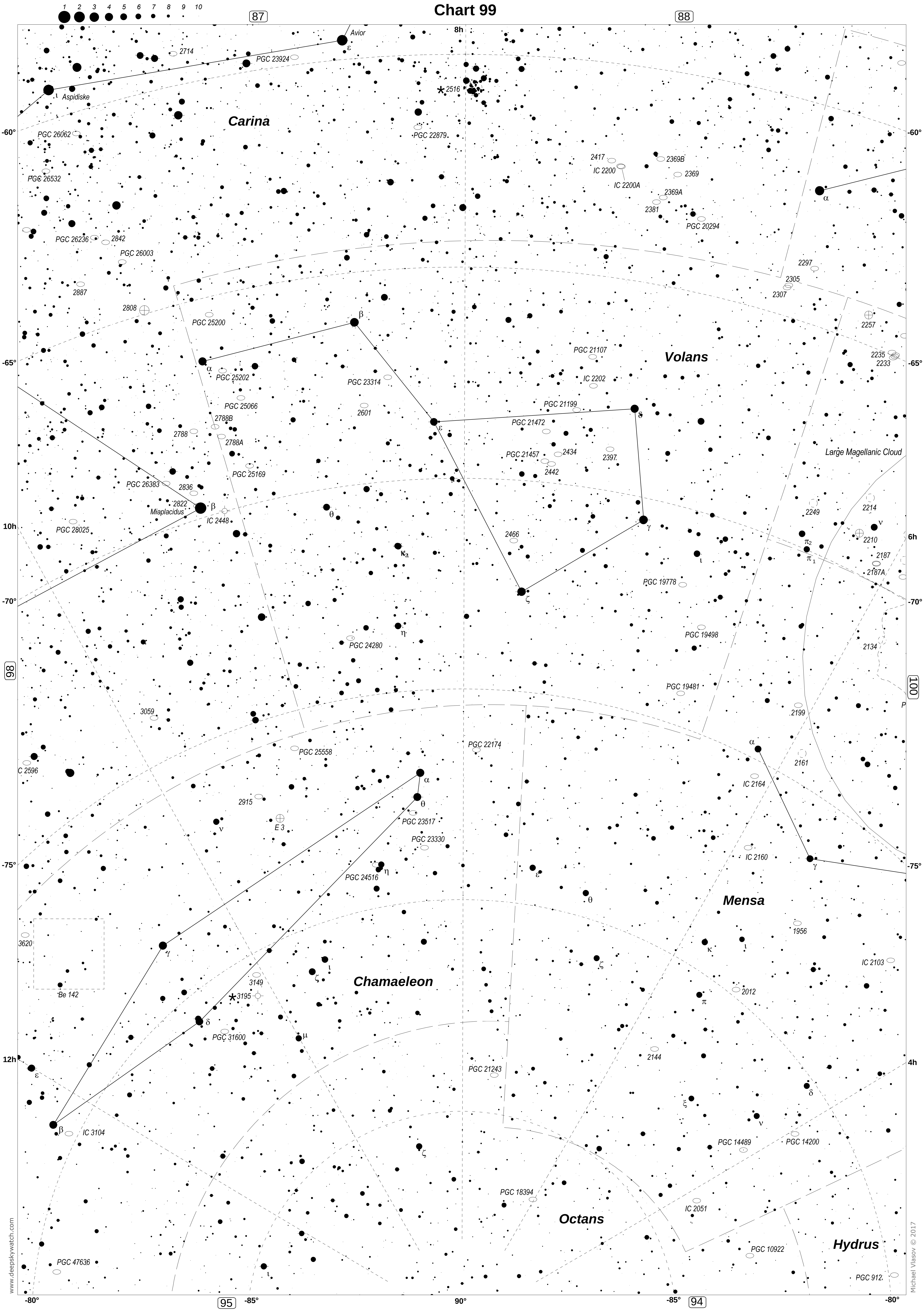
1 2 3 4 5 6 7 8 9 10

85 86 87



-80° 94 -85° 90° -85° 93 -80°

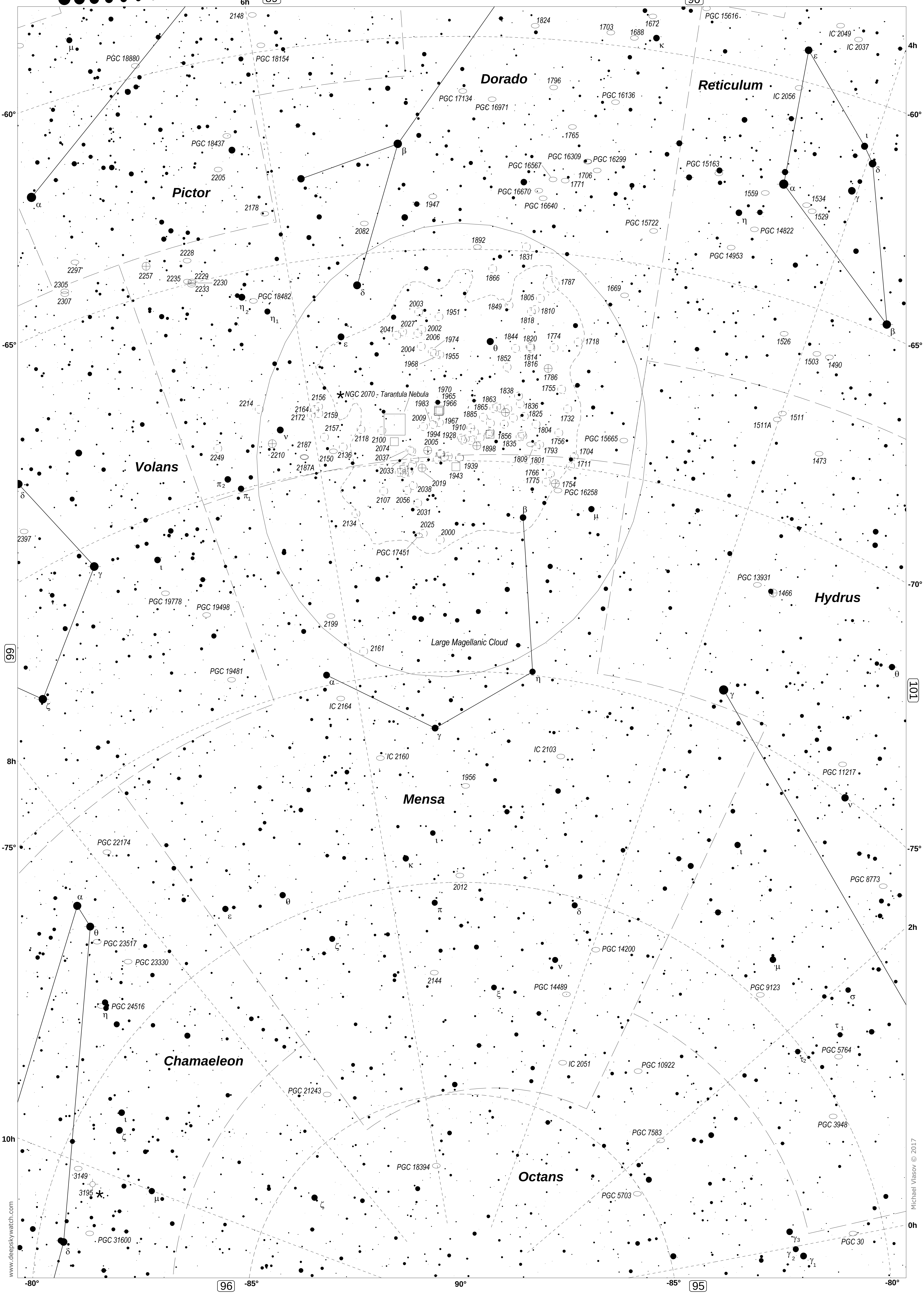
Chart 99



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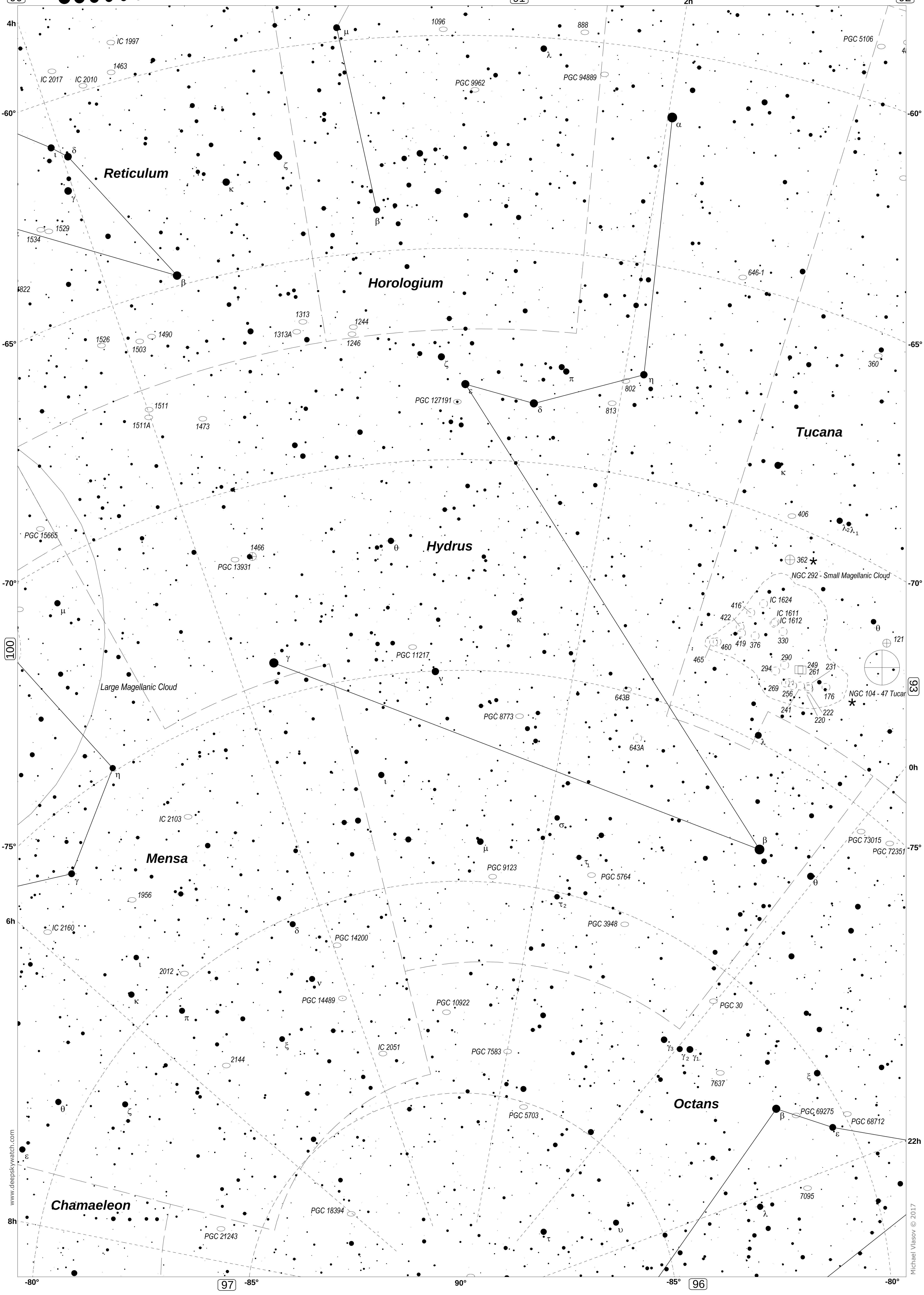
Chart 100



1 2 3 4 5 6 7 8 9 10
6h
89
90
Dorado
Reticulum
Pictor
Volans
Mensa
Hydrus
Chamaeleon
Octans
Large Magellanic Cloud
NGC 2070 - Tarantula Nebula
-60°
-65°
-70°
-75°
4h
2h
0h
8h
10h
99
101
96
95
-80°
-85°
90°
-85°
-80°
PGC 18880
PGC 18154
PGC 18437
PGC 17134
PGC 16971
PGC 16136
PGC 16309
PGC 16299
PGC 16567
PGC 16670
PGC 16640
PGC 15616
PGC 15163
PGC 15722
PGC 14822
PGC 14953
PGC 18482
PGC 15665
PGC 16258
PGC 17451
PGC 13931
PGC 19778
PGC 19498
PGC 19481
PGC 11217
PGC 8773
PGC 22174
PGC 23517
PGC 23330
PGC 24516
PGC 14200
PGC 14489
PGC 9123
PGC 5764
PGC 10922
PGC 21243
PGC 3948
PGC 7583
PGC 18394
PGC 5703
PGC 31600
PGC 30
IC 2049
IC 2037
IC 2056
IC 2164
IC 2160
IC 2103
IC 2051
1824
1703
1688
1672
1796
1765
1706
1771
1947
2082
2148
2205
2178
2228
2297
2257
2229
2230
2233
2235
2305
2307
1559
1534
1529
1892
1831
1866
1787
1669
1805
1849
1810
1818
2003
1951
2027
2002
2041
2006
1974
2004
1955
1968
1844
1820
1774
1718
1852
1814
1816
1786
1755
1526
1503
1490
1511A
1511
1473
2156
2214
2164
2172
2159
2157
2118
2100
1970
1965
1966
1983
2009
1967
1994
1928
1910
1885
1863
1865
1838
1836
1825
1732
1804
1756
1856
1835
1898
1793
1704
2005
2074
2037
2033
1939
1943
1809
1801
1711
1766
1775
1754
2019
2038
2107
2056
2031
2134
2025
2000
2187
2210
2249
2150
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2187A
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1466
2199
2161
1956
2012
2144
3149
3195
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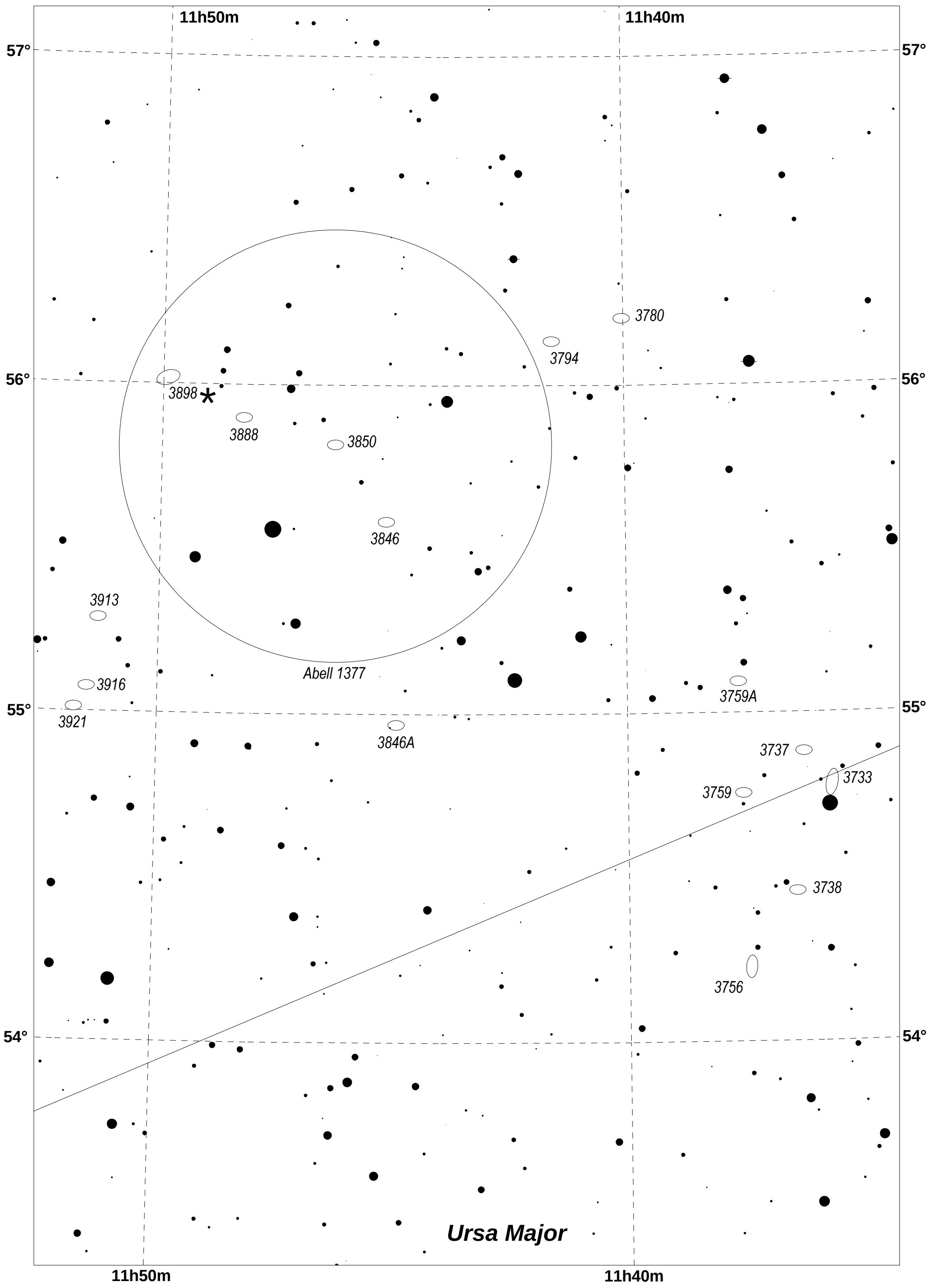
Chart 101

90 91 92

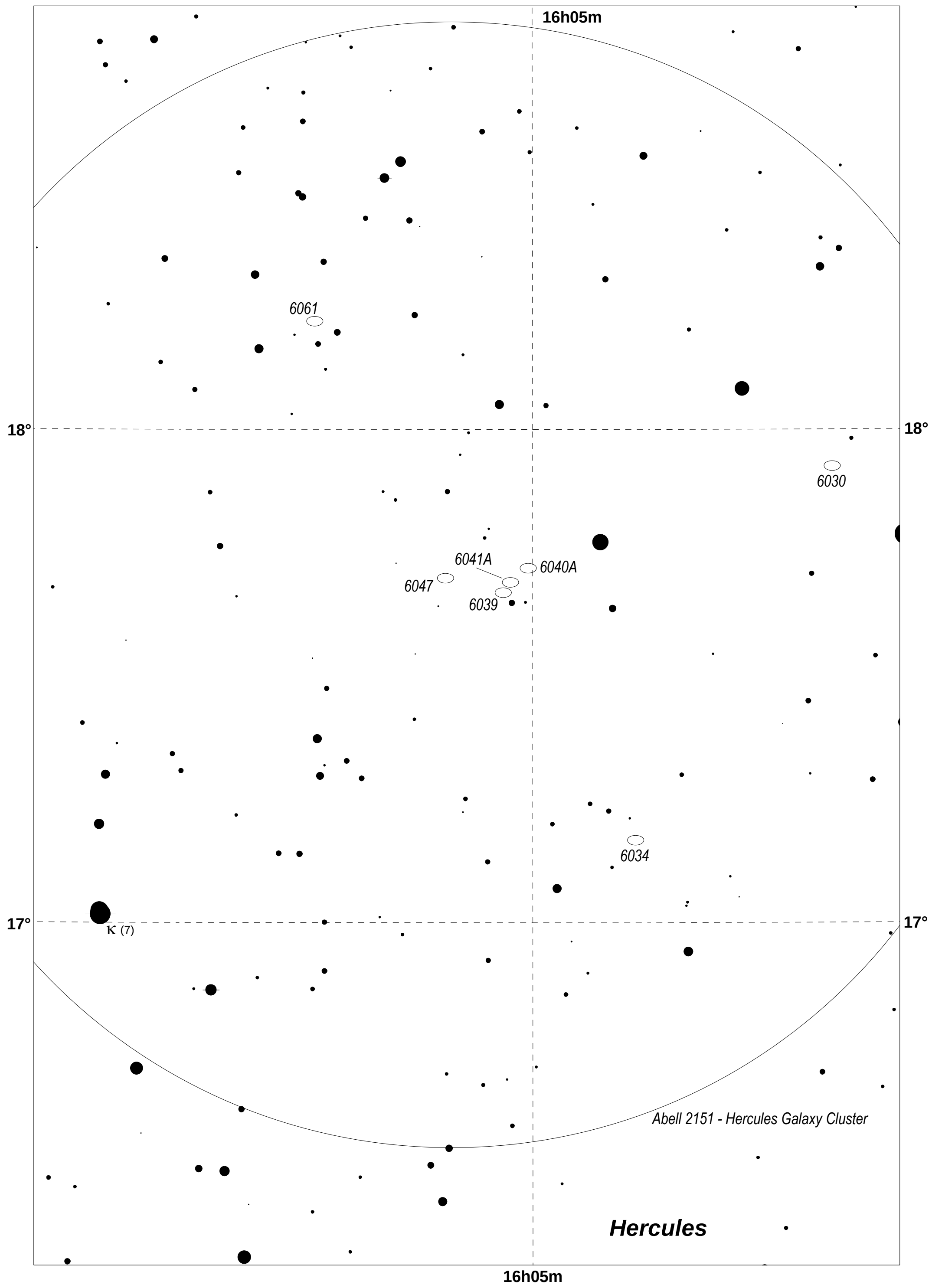


100 93 97 96

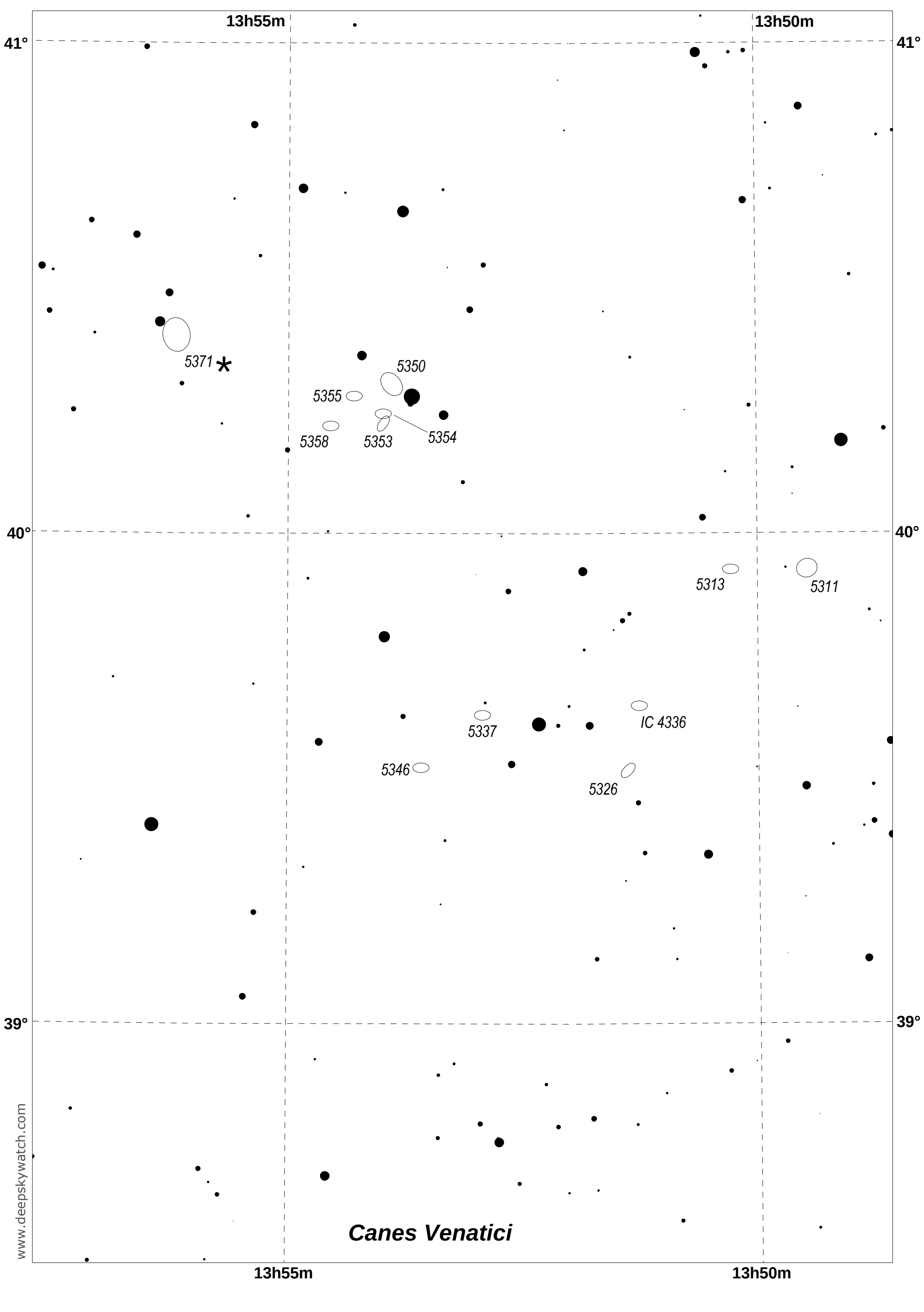
A1 - Abell 1377



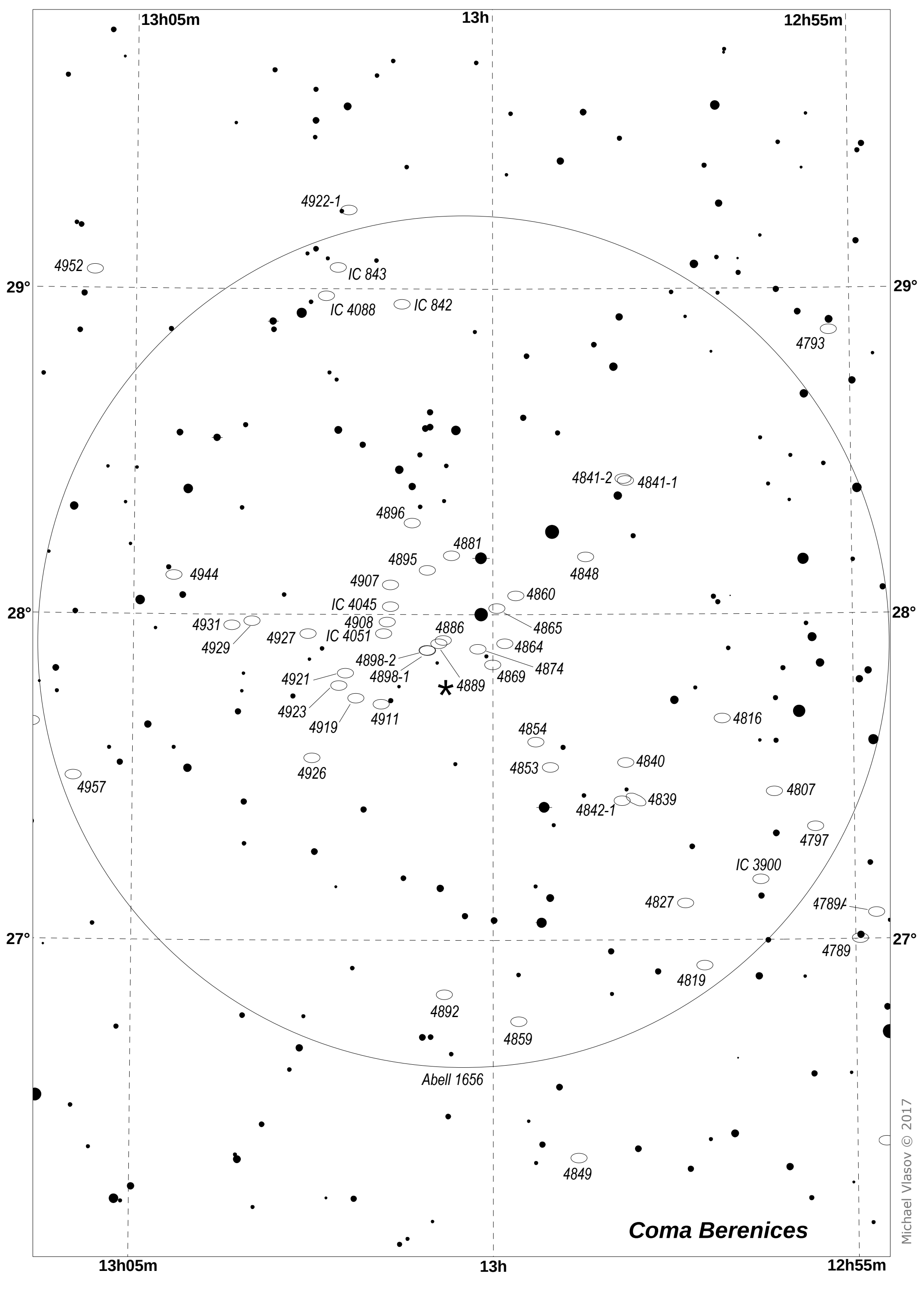
A2 - Hercules cluster Abell 2151



A3 - Hickson 68



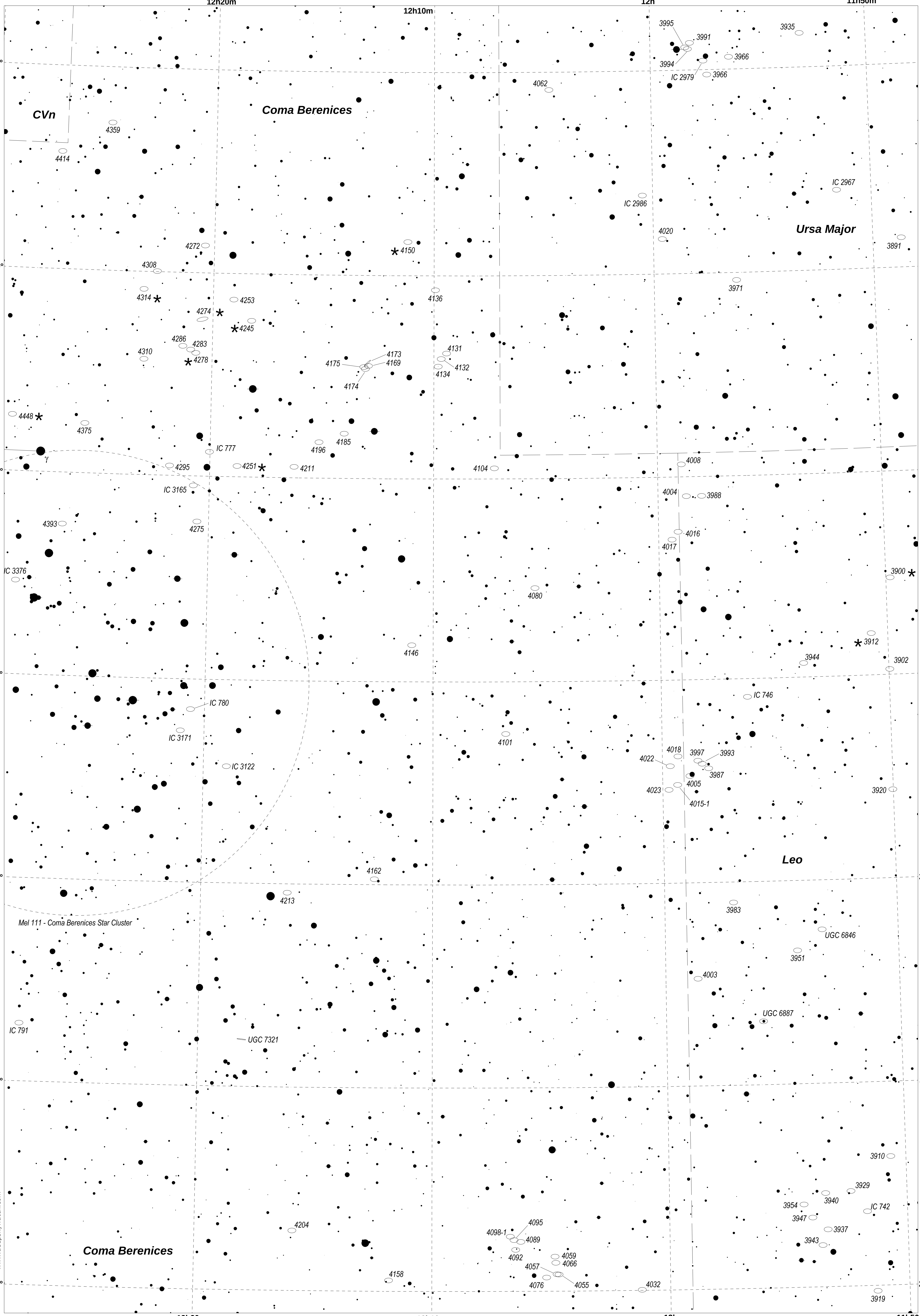
A4 - Coma cluster Abell 1656



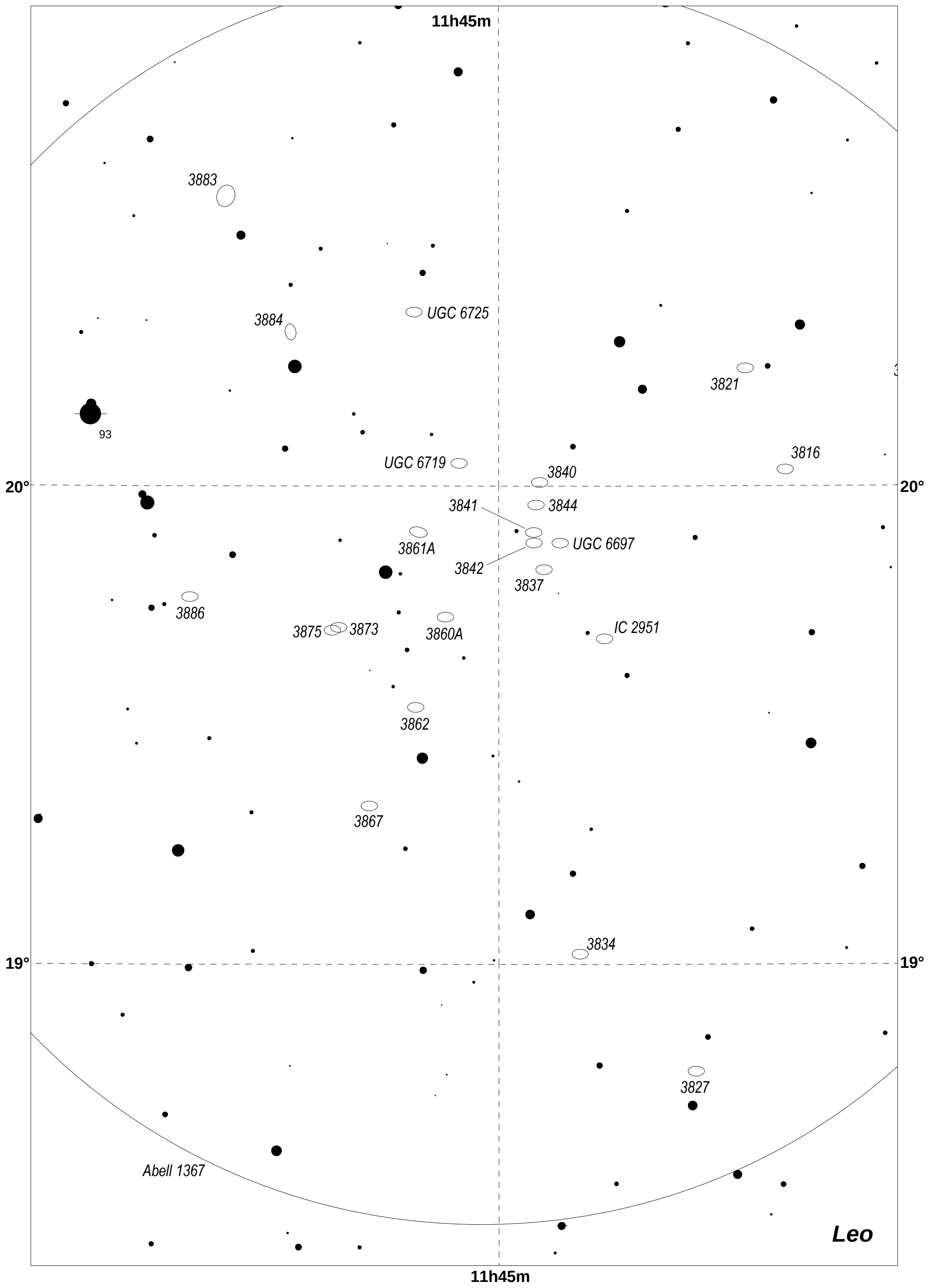
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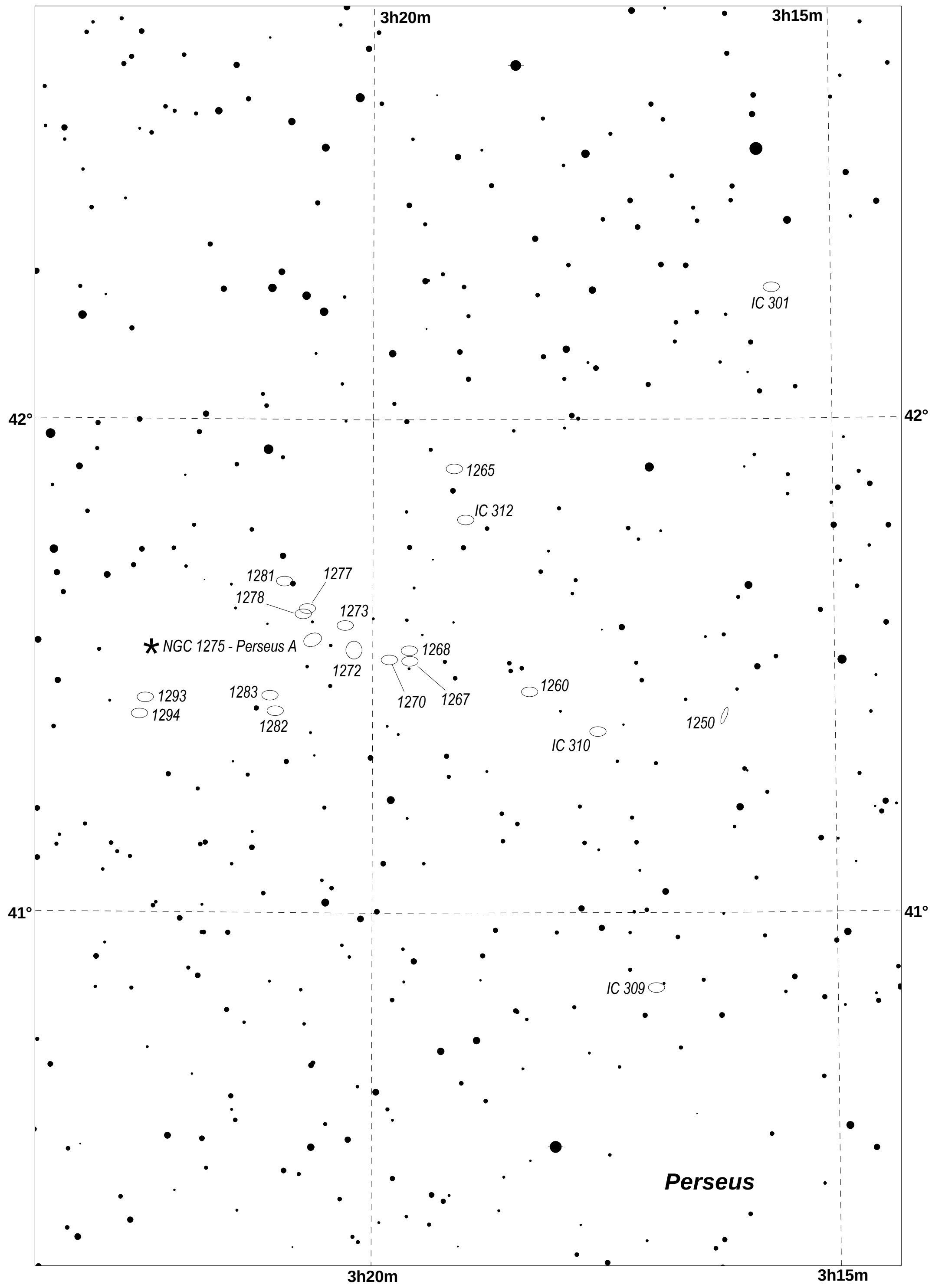
A5 - Coma star cluster area



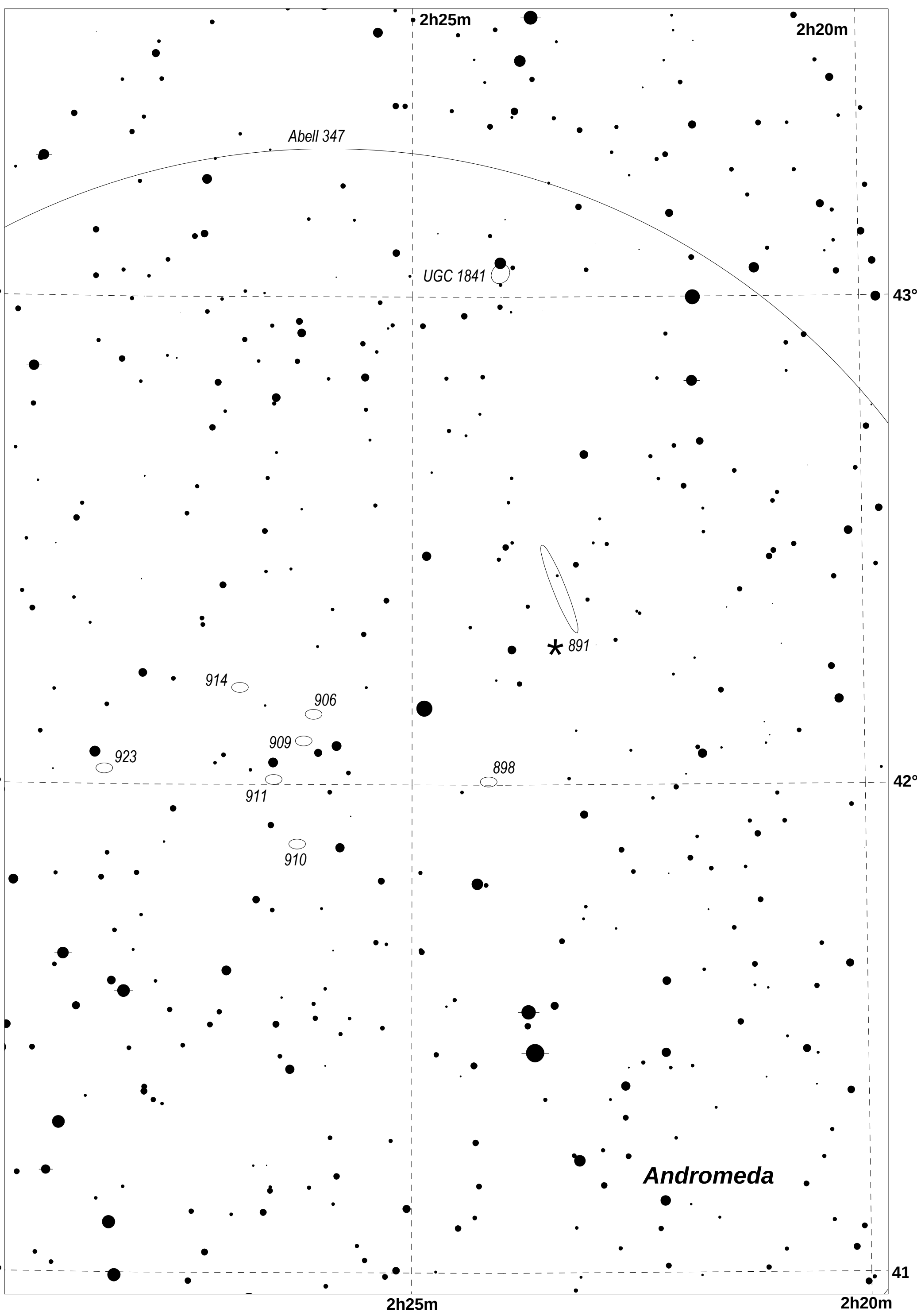
A6 - Leo cluster Abell 1367



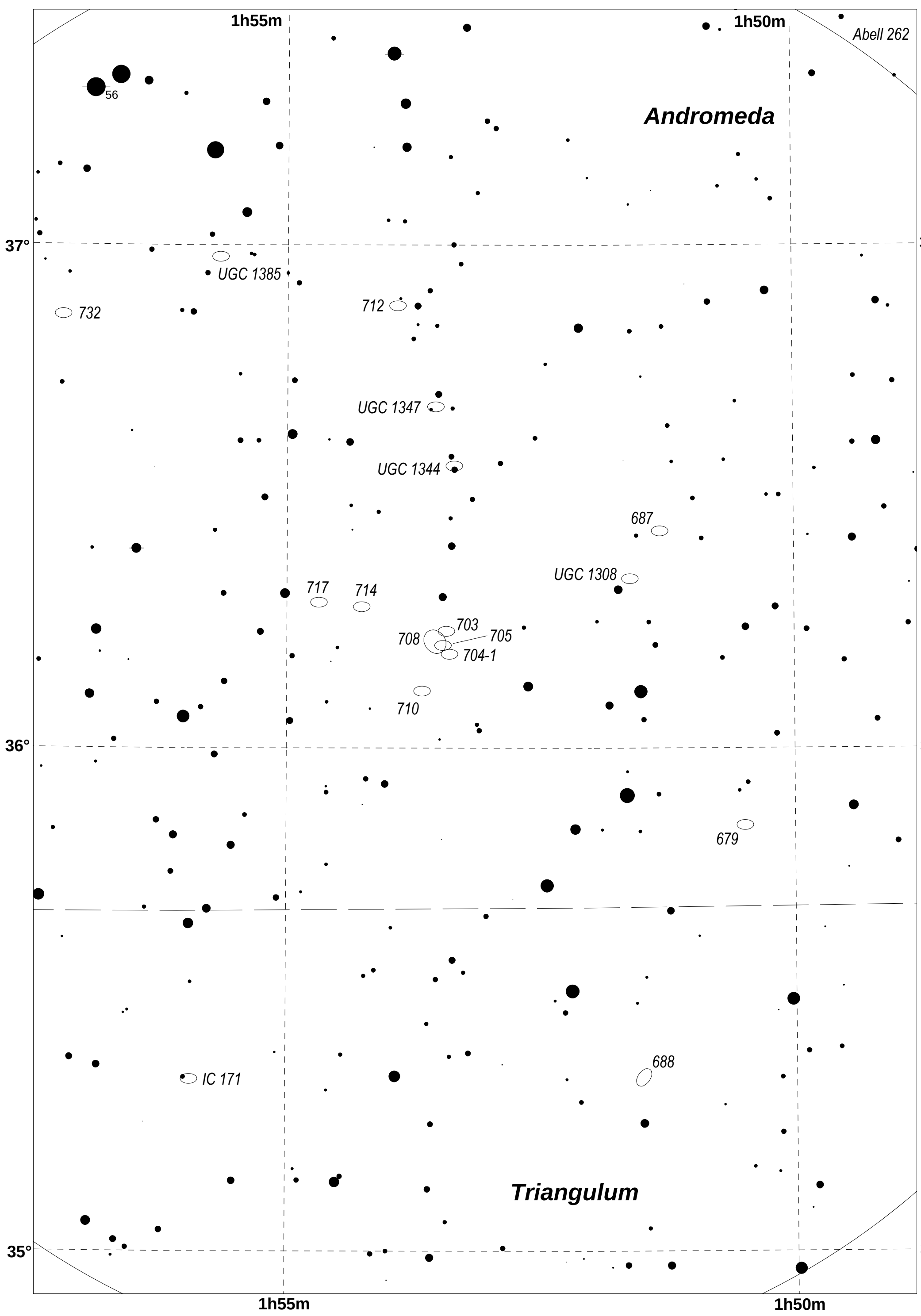
A7 - Perseus cluster Abell 426



A8 - Abell 347



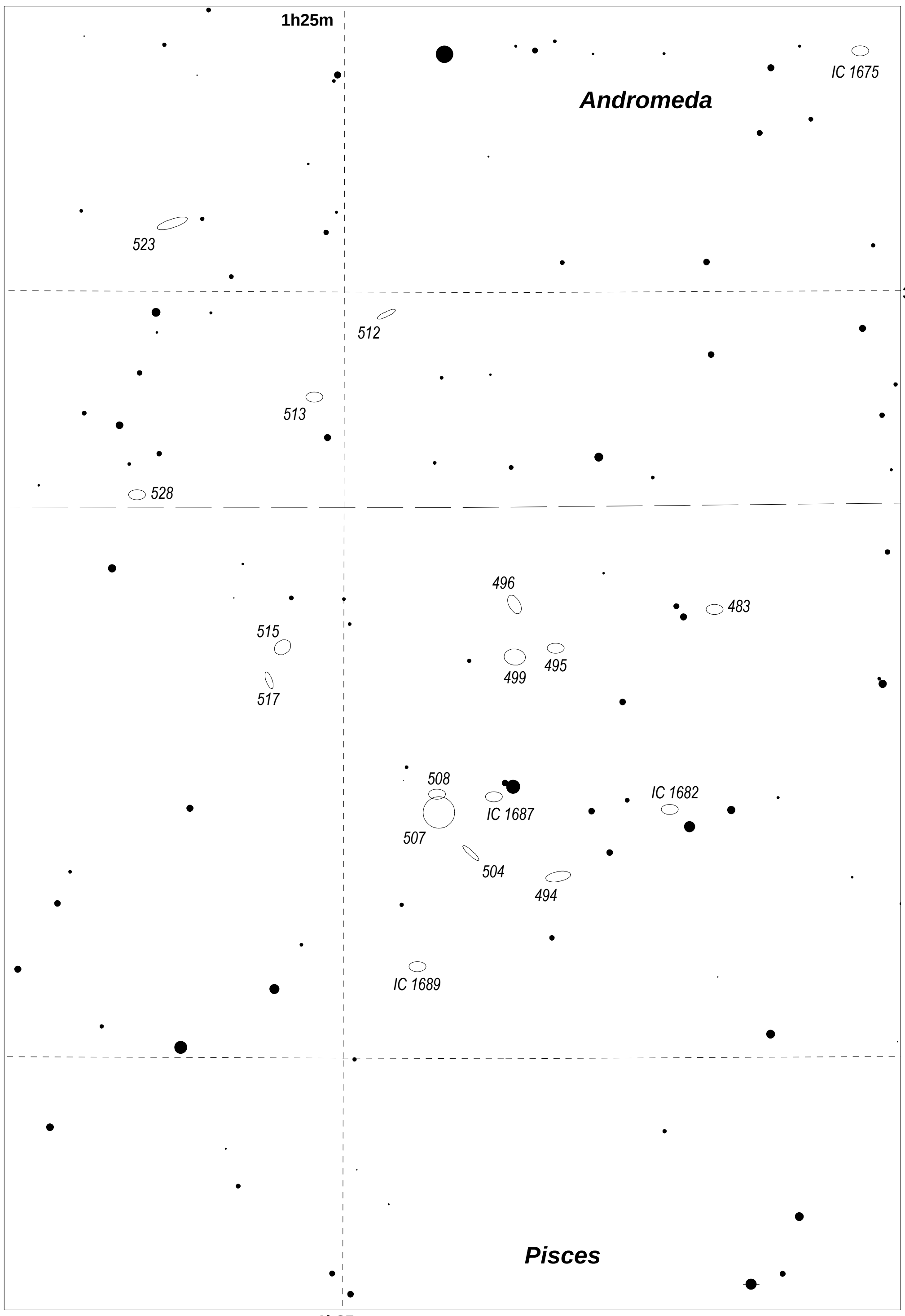
A9 - Abell 262



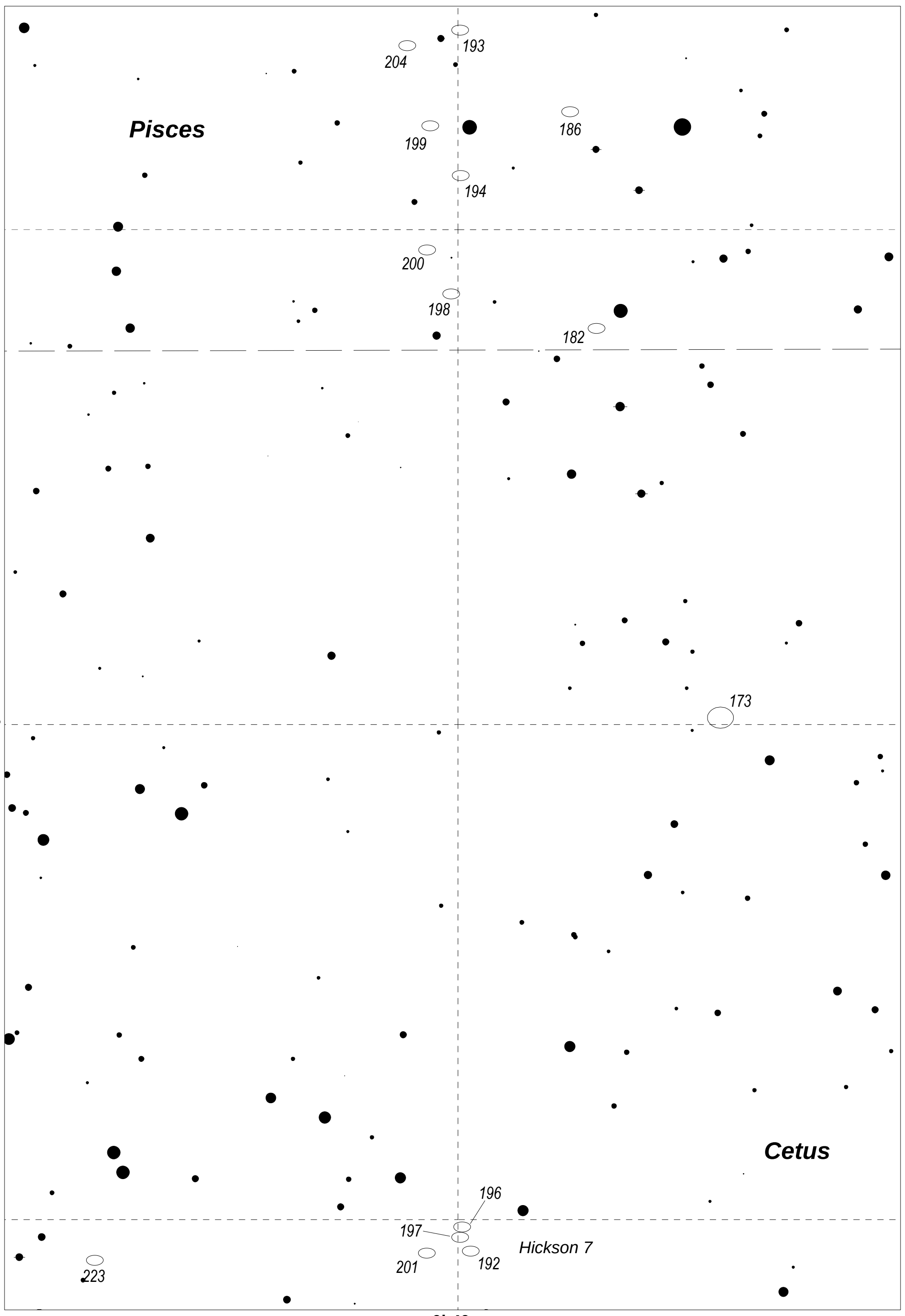
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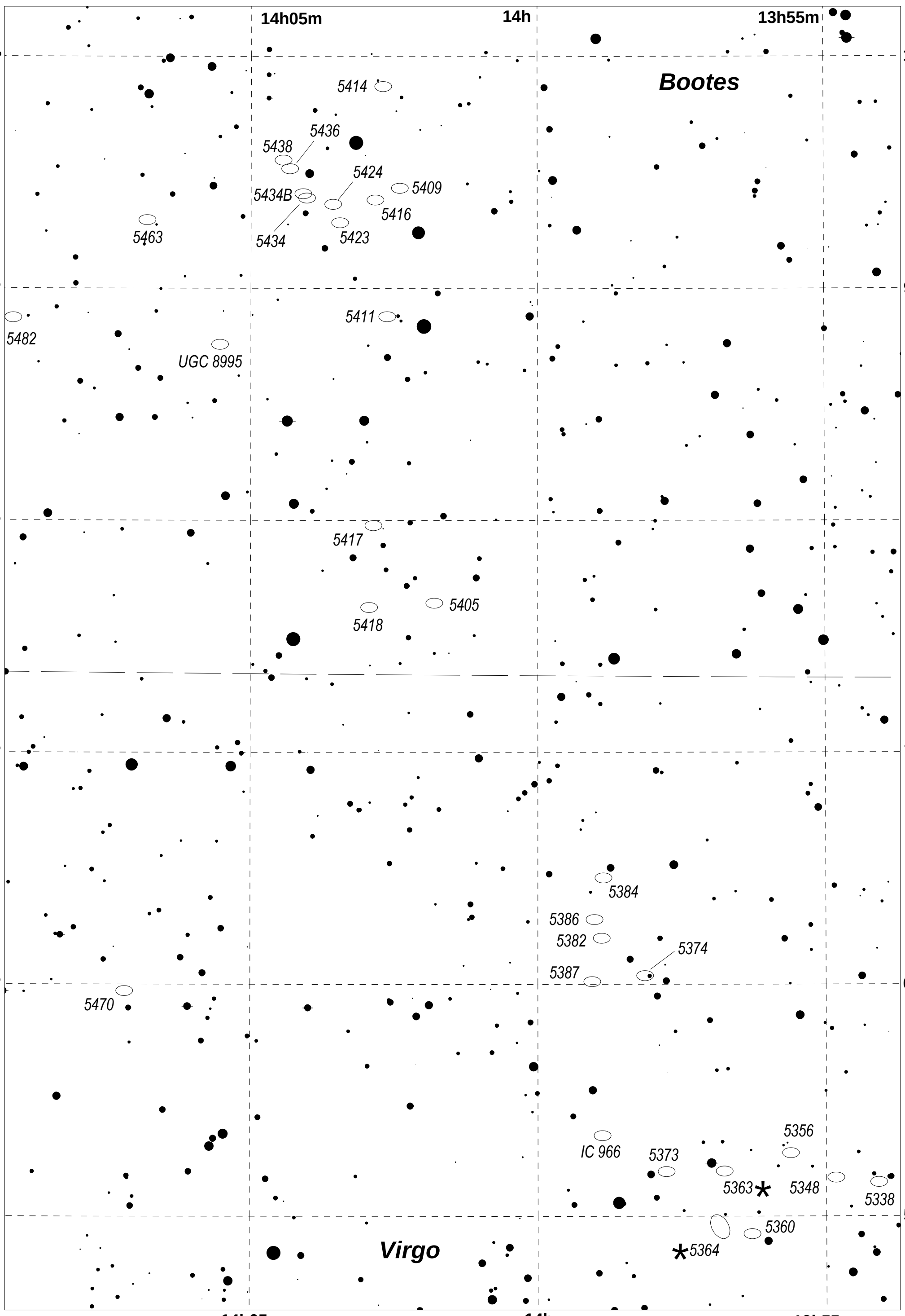
A10 - NGC 507 group



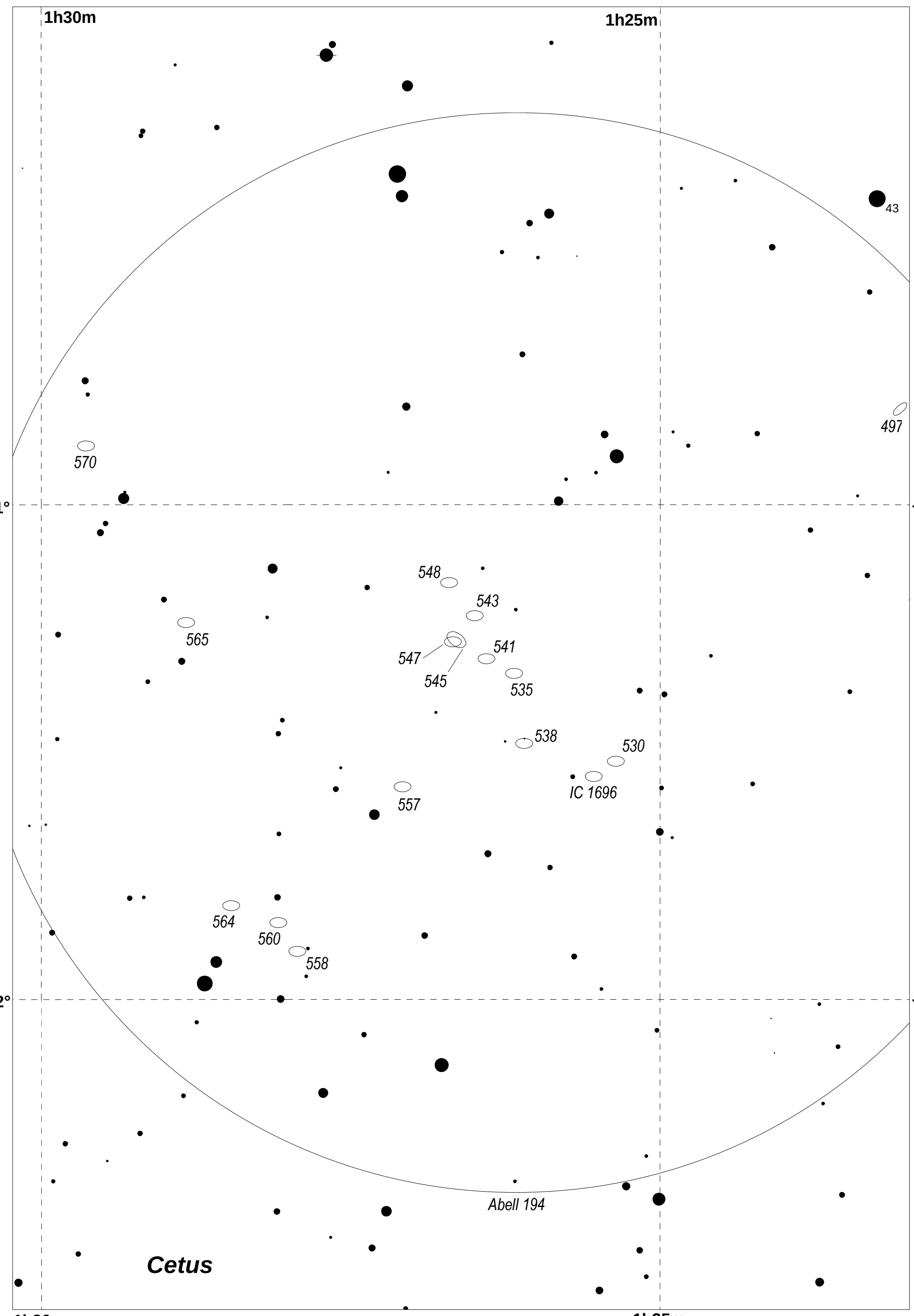
A11 - Hickson 7 and NGC 194 region



A12 - NGC 5364 region



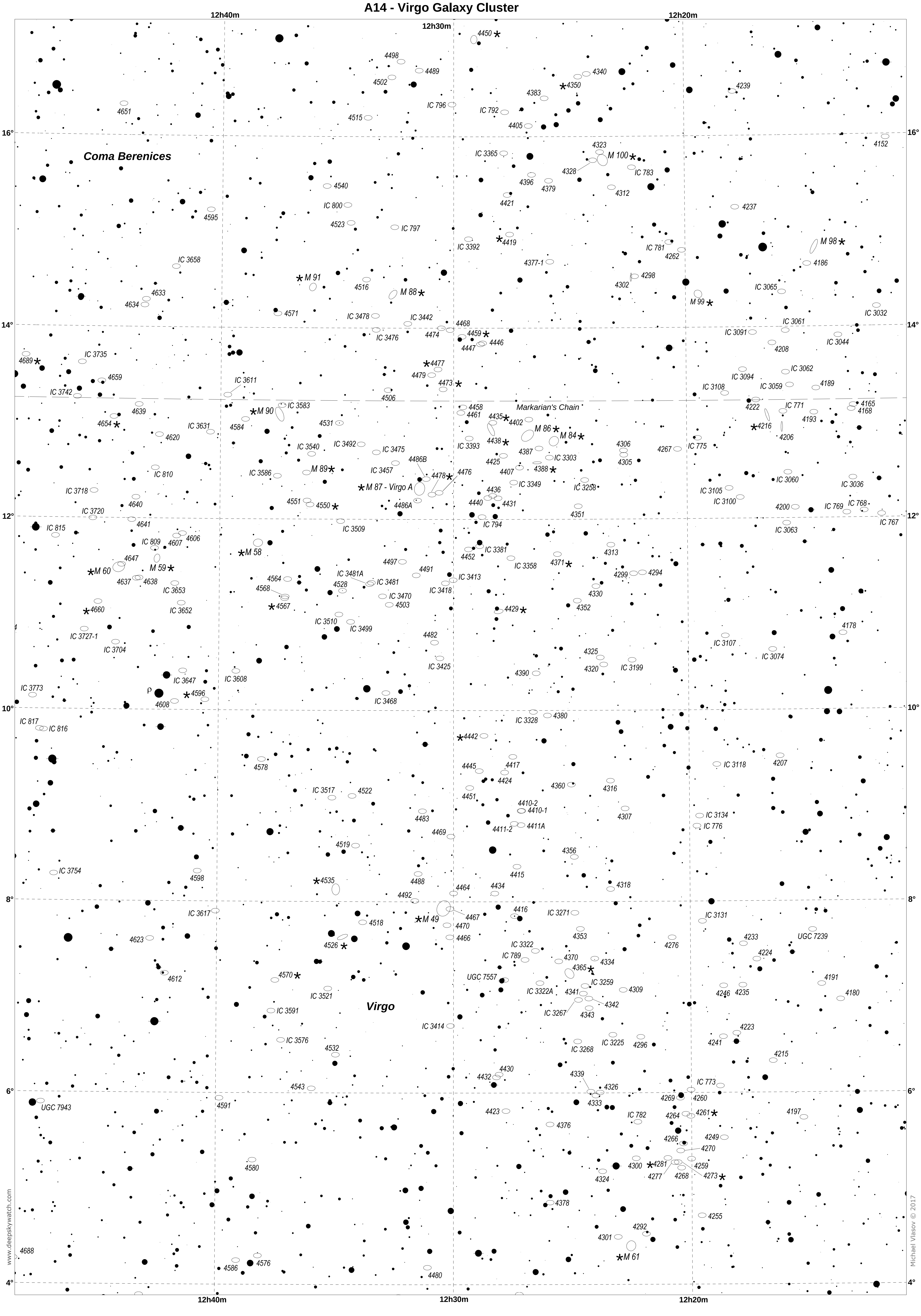
A13 - Abell 194



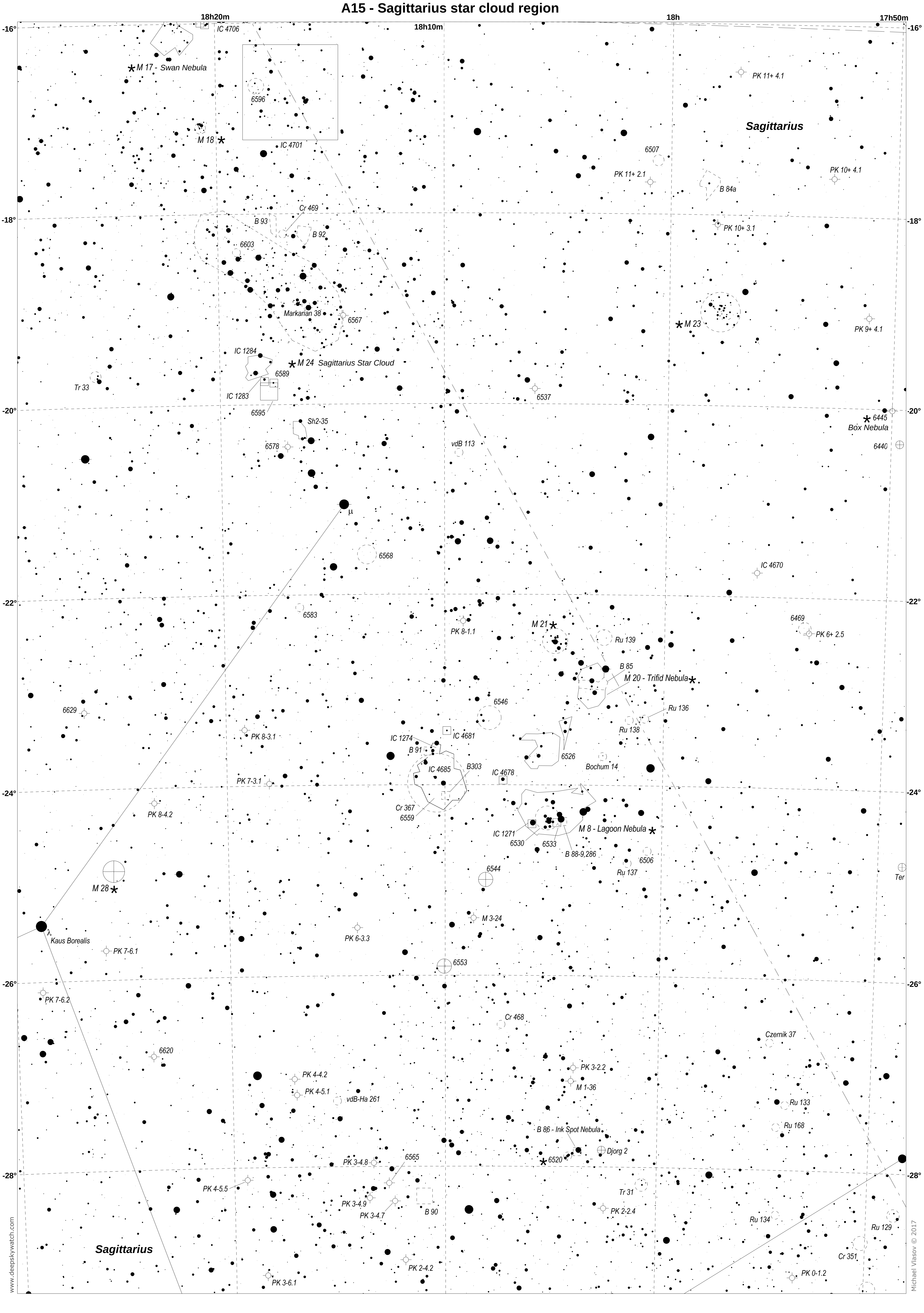
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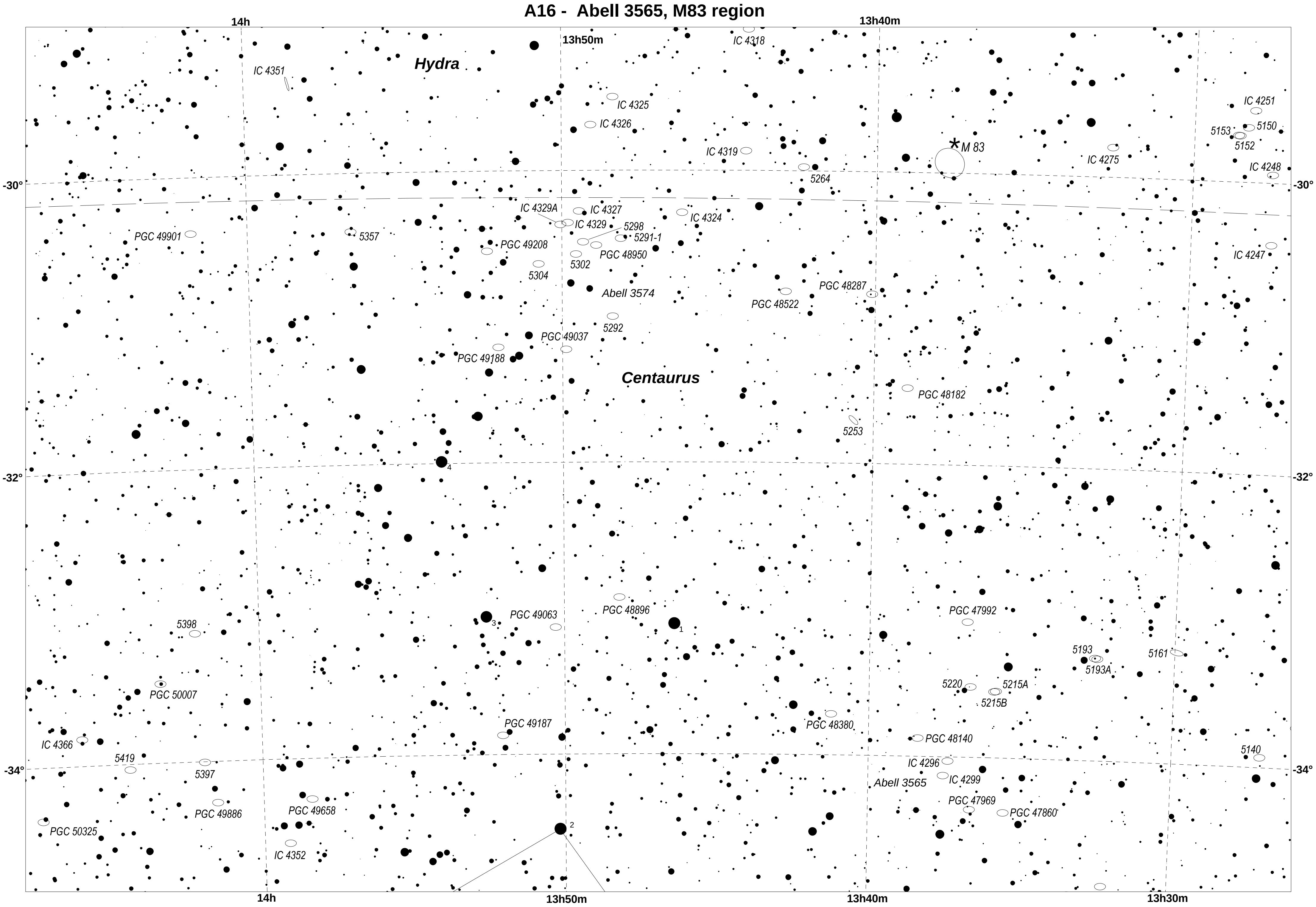
A14 - Virgo Galaxy Cluster



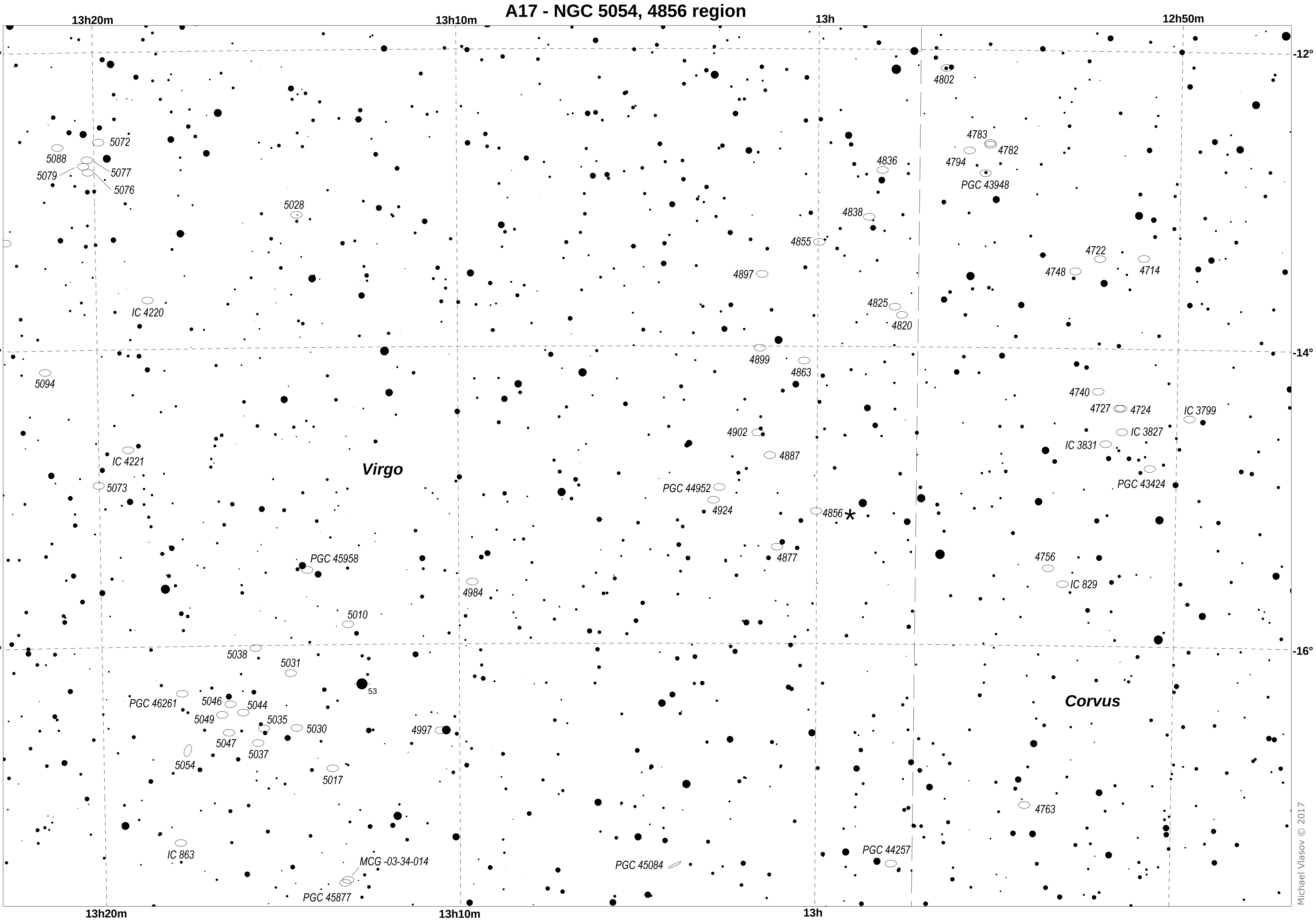
A15 - Sagittarius star cloud region



A16 - Abell 3565, M83 region

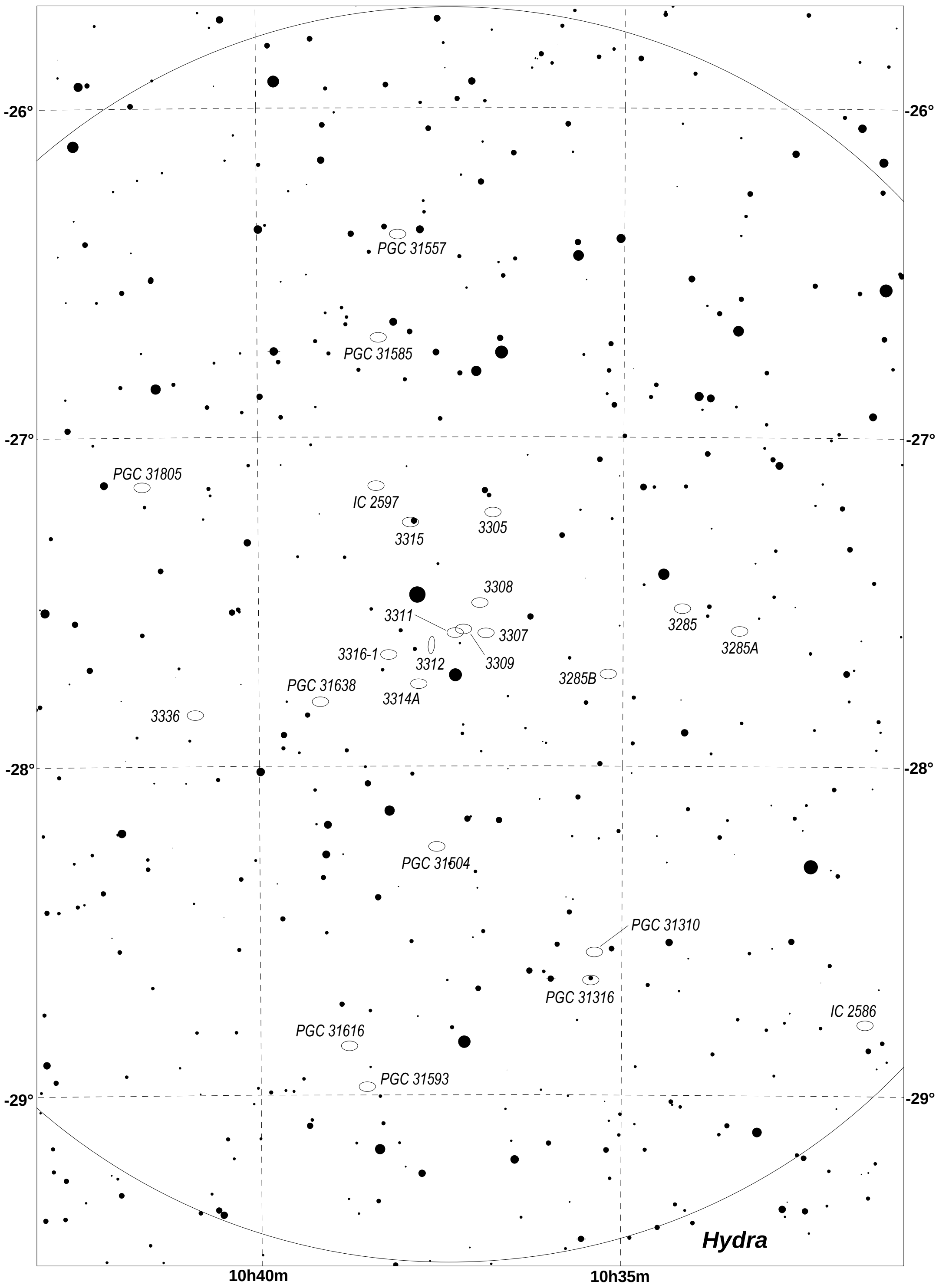


A17 - NGC 5054, 4856 region

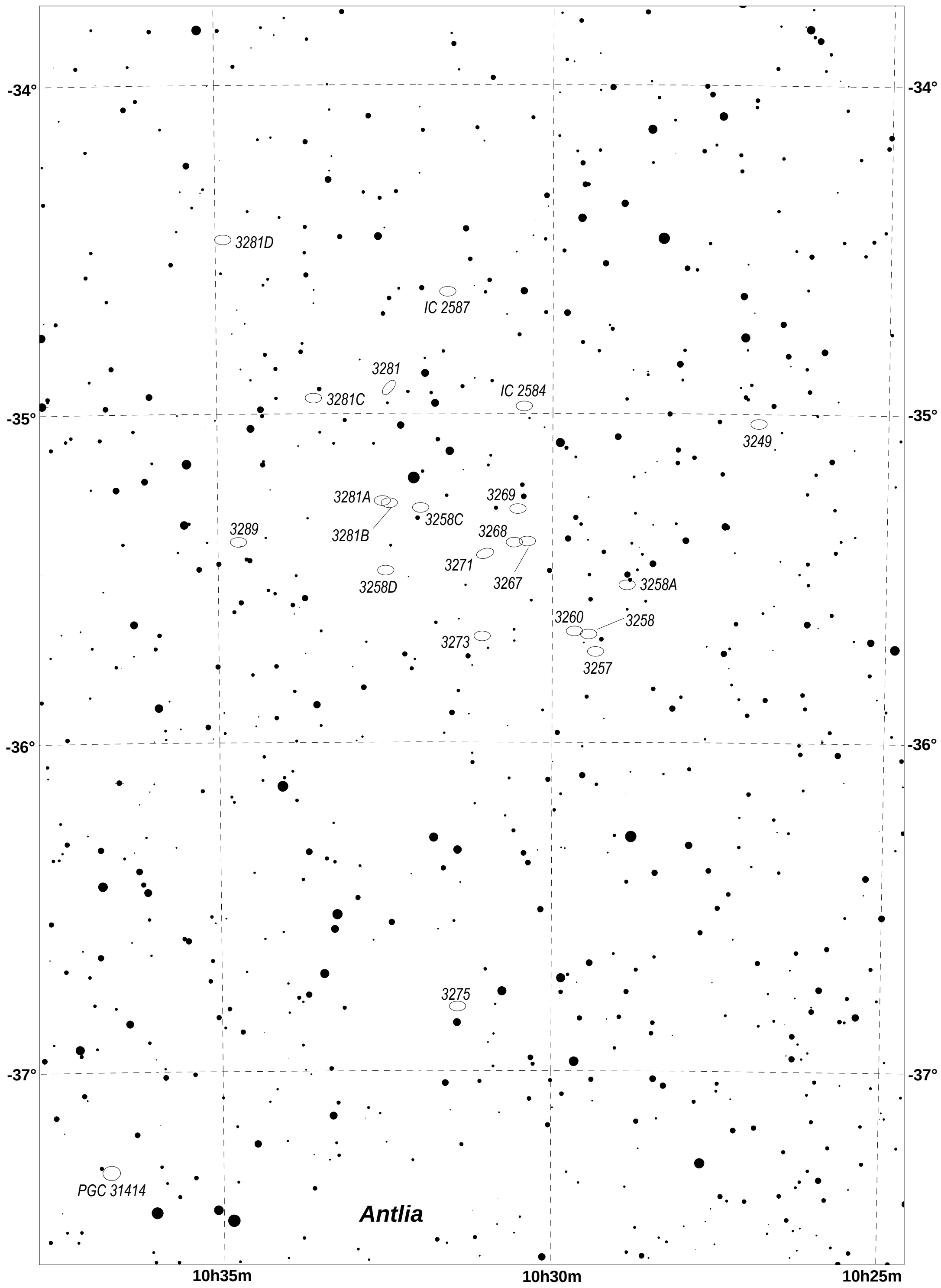


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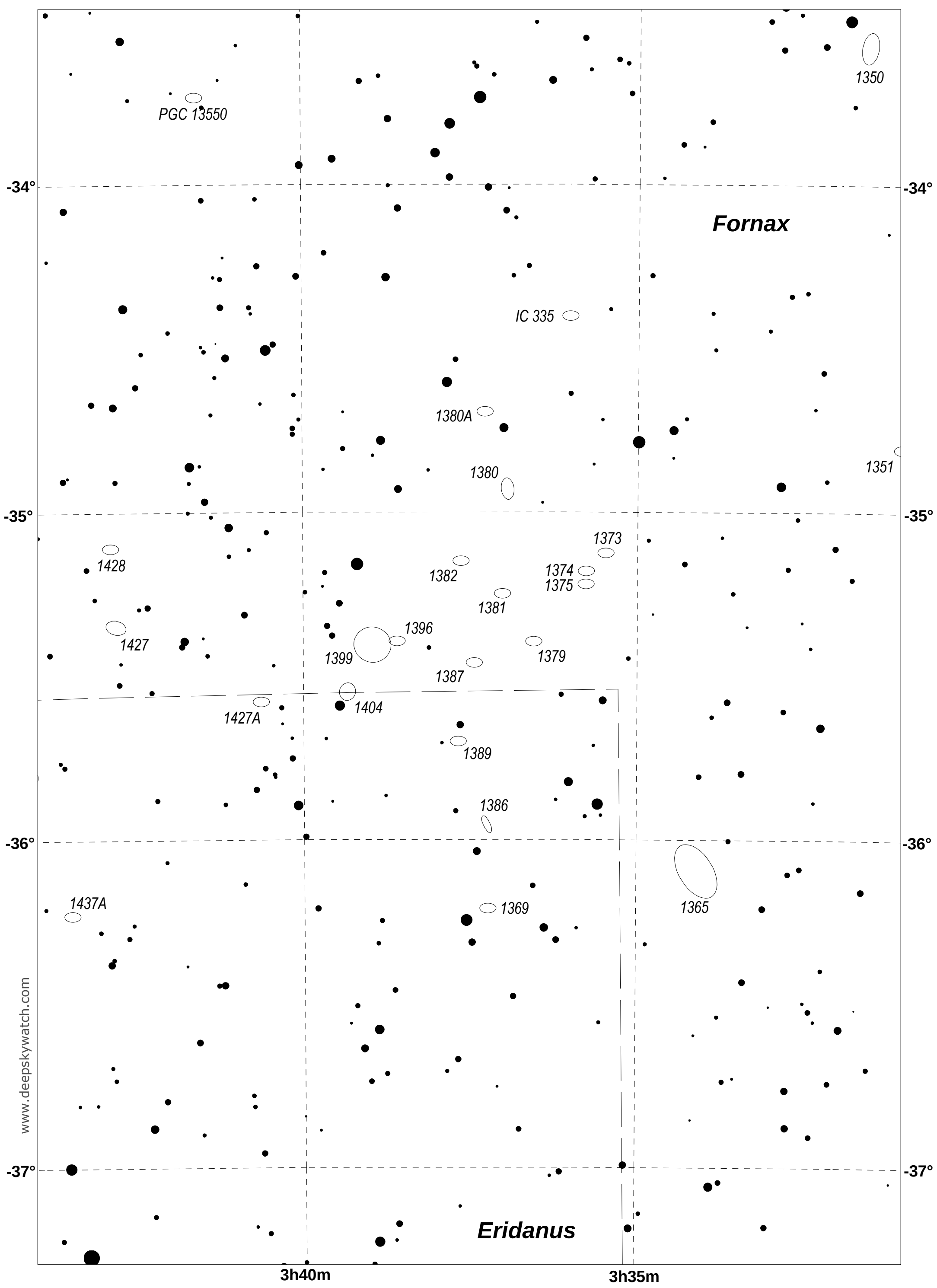
A18 - Hydra cluster Abell 1060



A19 - Antlia's cluster Abell S0636



A20 - Fornax cluster Abell S0373



A21 - Centaurus cluster Abell 3526

